

## **The self-perception of health and safety of health professionals in coping with covid-19**

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#### **Abstract:**

The aim of this study is to analyze how self-perception about the health and safety of health professionals can be observed in protection discourses in the pandemic context. The methodological basis is qualitative-quantitative in nature. For this, the survey method is used with the questionnaire technique for the survey of information on the self-perception of the professionals studied. The results indicate that linguistically-discursively the image of professionals about health and safety is mental health interventions are fundamental considering that 90.5% of the sample said they were at a limit of exhaustion and 73.8% said they had been psychologically shaken by the pandemic. Stress, anxiety, changes in sleep pattern and irritability were the most common changes in daily professional life. The phenomenon of *fake news* also proved to be an important difficulty for workers to work in the pandemic and the discourses of the media and the general population directly influenced the way of

facing the disease. It is concluded that post-pandemic psychological support is essential for workers and recent studies focused on post-pandemic effects and its influence in terms of discursive analysis.

**Keywords:** Covid-19, health professionals, protection speeches, vaccination.

## **A autopercepção da saúde e segurança dos profissionais de saúde ao lidar com a covid-19**

### **Resumo:**

O objetivo deste estudo é analisar como a autopercepção sobre a saúde e a segurança dos profissionais de saúde pode ser observada nos discursos de proteção no contexto pandêmico. A base metodológica é de natureza qualitativa-quantitativa. Para isso, o método de pesquisa é utilizado com a técnica de questionário para o levantamento de informações sobre a autopercepção dos profissionais estudados. Os resultados indicam que, linguisticamente, a imagem dos profissionais sobre saúde e segurança é uma intervenção de saúde mental é fundamental, considerando que 90,5% da amostra disse estar no limite da exaustão e 73,8% disse ter sido psicologicamente abalada pela pandemia. Estresse, ansiedade, mudanças no padrão de sono e irritabilidade foram as mudanças mais comuns na vida profissional diária. O fenômeno das notícias falsas também provou ser uma dificuldade importante para os trabalhadores trabalharem na pandemia e os discursos da mídia e da população em geral influenciaram diretamente a maneira de enfrentar a doença. Conclui-se que o apoio psicológico pós-pandêmico é essencial para os trabalhadores e estudos recentes focados nos efeitos pós-pandêmicos e sua influência em termos de análise discursiva.

**Palavras-chave:** Covid-19, profissionais de saúde, discursos de proteção, vacinação.

## **La autopercepción de la salud y la seguridad de los profesionales de la salud en el afrontamiento del covid-19**

### **Resumen:**

El objetivo de este estudio es analizar cómo se observa la autopercepción sobre la salud y la seguridad de los profesionales sanitarios en los discursos de protección en el contexto de la pandemia. La base metodológica es de carácter cualitativo-cuantitativo. Para ello, se utiliza el método de investigación con la técnica del cuestionario para el levantamiento de información sobre la autopercepción de los profesionales estudiados. Los resultados indican que, lingüísticamente, la imagen de los profesionales sobre la salud y la seguridad es una intervención de salud mental es fundamental, teniendo en cuenta que el 90,5% de la muestra dijo estar al límite del agotamiento y el 73,8% dijo haber sido sacudido psicológicamente por la pandemia. El estrés, la ansiedad, los cambios en el patrón de sueño y la irritabilidad fueron los cambios más comunes en la vida laboral diaria. El fenómeno de las noticias falsas también resultó ser una gran dificultad para los trabajadores de la pandemia y los discursos de los medios de comunicación y de la población en general influyeron directamente en la forma de afrontar la enfermedad. Se concluye que el apoyo psicológico pospandémico es esencial para los trabajadores y los estudios recientes se centran en los efectos pospandémicos y su influencia en términos de análisis del discurso.

**Palabras clave:** Covid-19, profesionales sanitarios, discursos protectores, vacunación.

### **INTRODUCTION**

The covid-19 pandemic event (Coronavirus Disease 2019) brought about physical, psychological, and social disturbances to society at all distinct levels (Faro, *et al.*, 2020). The

first confirmed cases of the disease were reported in the Chinese city of Wuhan, later due to the high rate of transmissibility of the virus, new cases were confirmed worldwide (Wu *et al.*, 2020). The first confirmed case in Brazil occurred on February 25, 2020, according to information released by the Ministry of Health. As of February 25, 2021, the country had more than 250,000 deaths due to Covid-19, data that have so far shown the highest average daily deaths from the disease in Brazil.

The number of confirmed cases and sick people by Covid-19 increases exponentially throughout the country, requiring new strategies to be created and updated constantly to meet the demand of the population. In turn, the high of this demand requires a considerable number of professionals capable of coping with the pandemic, health professionals. With the constant advance of the pandemic, there was an overload of health services due to the dense demand for care (Silva *et al.*, 2020).

Health professionals are the group in the fight against the front line of the Covid-19 pandemic. Because they are directly or indirectly exposed to infected patients, they naturally have an increased risk of contracting the disease. These subjects who participate daily in coping are submitted to long working hours, exhausting working conditions, stress, and anxiety for patient care (Teixeira *et al.*, 2020). The context of the pandemic therefore requires greater attention to the health worker about physical and mental aspects, fear of contamination of family members, distress, stress, anxiety, depression, lack of basic income for the treatment of patients, lack of adequate structure and protective equipment for performance of activities and devaluation by the population are some of the complaints of professionals (Wu *et al.*, 2020).

A survey conducted by Fiocruz on the working conditions of health professionals showed that there was a meaningful change of 95% of the sample about living standards. In addition, data were demonstrated that indicate the excess workload experienced by professionals and at the same time the feeling of devaluation of the profession in addition to the physical and mental fatigue generated by the entire context of the pandemic. Another qualitative research conducted by Vedovato *et al.* (2021) addressed the issue of illness and death of health professionals during the confrontation of the pandemic, emphasizing the need to make visible the health care of these subjects making it an ethical, moral, and political duty of society.

## THE OVERLOAD OF THE HEALTH SYSTEM AND THE IMMUNIZATION PROCESS OF COVID-19 IN BRAZIL

Given the growing scenario of the number of confirmed cases of COVID-19 in countries around the world, several health systems found challenges and difficulties in presenting an efficient management system that was able to supply all the demand for resources for primary and secondary care of patients without the system collapsing. Therefore, Gleriano *et al.* (2020) points out that COVID-19 proves to be an unprecedented challenge for health systems around the world, and in the Brazilian public health system, it is necessary to recognize the limitations in management, coordination and the advances and setbacks of the sum of 30 years of SUS.

Rodrigues and Azevedo (2020) reveal that the pandemic crisis by coronavirus exposed difficulties of coordination between the different actors and federative entities within the political-administrative framework and the coordination of territoriality. Weaknesses start from distinct factors such as the process of decentralization, depreciation of the infrastructure of care levels: primary, secondary, and tertiary and from the absence of human resources including precariousness of work, overload of services and low investment in the sector in general (Campos, Machado, Girardi, 2020).

All these factors have culminated in the overload of the health system that is seen with an overcrowding of intensive care units (ICU) and the collapse in several Brazilian states such as Amazonas. To combat this effect, in Brazil, there are several coordination of actions to combat the COVID-19 pandemic carried out through contact with public universities, producers of qualified scientific knowledge with agile response, but the need for potentiation of efficient organization that can promote better care conditions as seen in the user-centered health system is still emphasized, managers and health professionals (Gleriano *et al.*, 2020).

The immunization process and the individual society relationship regarding the refusal and acceptance of vaccines is not new to scientists and epidemiologists. The World Health Organization (WHO) defines this refusal/hesitation to the vaccine as a complex and dynamic social phenomenon (WHO, 2014). In the context of covid-19, the intense demand for the vaccine is part of the two-sided analysis, the first focused on the denialism of science that includes *fake news* and the refusal to immunize, and the second side the growing demand for vaccination from the feeling of fear, the repercussions of the pandemic and the vaccination goal of the entire health system (Couto *et al.*, 2021). Thus, Poland and Jacobson (2020) portray

the Brazilian scenario as a transition from vaccine hesitation to the cry for a vaccine and a mass immunization with greater urgency.

#### **HEALTH OF PANDEMIC PROFESSIONALS AND THE NEED FOR MENTAL HEALTH CARE**

Teixeira *et al.* (2020) states that health professionals constitute a risk group for Covid-19 because they are directly exposed to infected patients at the beginning of the pandemic, before the immunization process, and then receive a high viral load. In addition, stress, anxiety, adverse work conditions, lack of adequate infrastructure and physical and mental exhaustion are factors that persist in the daily routine of these professionals even after their immunization. Hankivsky and Kapilashramim (2020) also point out that the workforce of professionals in coping with the COVID-19 pandemic is not a homogeneous group but a heterogeneous group that requires a complex analysis that should be able to encompass the differences in gender, race, social class, professional training, opportunities for insertion in the labor market, routines, interpersonal relationships and in the context of health services.

Submitted to different adverse work conditions characterized as precarious and stressful in view of excessive work overload and dramaticity of suffering and death of patients, these professionals have presented physical and mental exhaustion in several studies around the world. A cross-sectional study conducted in many regions in China with a sample of 1,257 professionals revealed a considerable proportion of individuals with depression, insomnia, anguish, demotivation, and frustration (Lai *et al.*, 2020). Another study conducted in Brazil by Bosco *et al.* (2020) in a regional university hospital revealed the prevalence of anxiety in 48.9% of the sample and depression in 25%.

#### **PHENOMENON OF FAKE NEWS AND THE INFLUENCE ON THE BEHAVIOR OF THE POPULATION AND THE RELATIONSHIP WITH HEALTH PROFESSIONALS.**

The education and knowledge constructed by the population were made possible by technological changes regarding communication and democratization of access to information (Braga, 2018). This is a fundamental piece of significance and for this reason it is

used for the sharing of content in different spheres such as education, politics, and health (Brazil, 2021). In situations of outbreaks, epidemics and health like covid-19, communication becomes responsible for developing accurate information on the facts that help the population and the agencies responsible to take more effective measures (Júnior *et al.*, 2020).

The implications of this sharing of information in a world attentive to the situation and propagation of the new coronavirus reveals a phenomenon already existing in the age of technology and that hinders efforts to disprove the high number of false information that is created and shared, the so-called *Fake News* (Neto *et al.*, 2020). False messages are spread in various formats and media and tend to have an informative and easy-to-understand text, which leads part of the population not to check the veracity of the content, believing what is informed (Galhardi *et al.*, 2020).

Junior *et al.* (2020) highlighted the amount of false information disseminated in Brazil and Europe through its qualitative and quantitative literature review of the use of the term "coronavirus", messages such as "Gel alcohol has no efficacy, vinegar yes" and "Hydroxychloroquine and chloroquine cure coronavirus" presented the research with greater search presence. In addition, it is worth mentioning that in addition to the medications mentioned, several messages from "specialists" or people as "witnesses" to have cured themselves of COVID-19 with the use of home remedies and medications such as Ivermectin went viral on social networks, leading to the spread of *fake news*, especially at a time when immunization was still in the process of testing and official registration. After the officialization and establishment of the immunization plan in the country, the *fake news* surrounding vaccination persisted with information contesting the efficacy and consequences of genetic alterations that immunizations could cause.

This constant and unverified flow of information has a negative impact on the fight against the COVID-19 pandemic, besides causing a direct effect on the population's belief in the performance of health professionals. Soares *et al.* (2020) in his qualitative documentary research on disinformation and the fight against the pandemic in the country highlighted verbalizations of health professionals that demonstrate the concern with the speed of *Fake News*: "Our job is to save lives, but at this point in the pandemic we also face a global infomedia with misinformation virilizing on social networks and threatening lives around the world." In addition to all the activity caused by coping with the pandemic and the harm of patients,

health professionals are making more efforts to disprove the high number of false information.

Therefore, it is necessary that the flow of communication between specialists in the area aimed at protecting and combating the pandemic does not remain restricted to the academic environment and professionals in the area but accessible and democratic to the entire population (Lana *et al.*, 2020).

Insanguine Mingarro & Claramunt (2021) reinforce that vaccination alone is the way to overcome the pandemic and that in addition to the medical difficulties to face the disease, as well as to obtain the vaccine, it is still necessary to know how to deal with other problems such as the dissemination of *fake news* that disorient and confuse the population as well as the incidence in the field of anti-vaccine movements, which also corroborate the disinformation and the spread of political ideologies contrary to science. The authors believe that to eradicate contagion in each territory, a few governments have adopted the policy of herd immunity or group immunity, which provides for collective resistance to a given pathogen, triggering the so-called herd effect. To reach this status it is necessary that a remarkably high number of people do prophylactic practice. In the case of Brazil, this belief further engendered the spread of *fake News*, because in addition to having fed this measure as the most effective, it incited a certain discredit in vaccination.

Montagni *et al.* (2021) confirms that disinformation poses a threat to public health and as for COVID-19, *fake news* has caused the public to doubt the veracity of public and political authorities regarding the information of the COVID-19 virus. The authors report that information such as: only older adults can be infected; swallowing bleach can kill the virus; that the virus is laboratory product, that is, it was produced intentionally, spread to the point of becoming a truth for most people. Comparatively, these beliefs were also commonly propagated in Brazil. Much has been discussed about childhood immunization, which was now considered immune, now considered as a social minority. In Iran, according to the authors, people died when they came to swallow alcohol, to treat COVID-19, a result of misinformation and reliability on social networks.

Matos *et al.* (2020) believe that the process of vaccination has a disinformation problem. It became a broader social dimension in other countries too, such as the increase in vaccine hesitancy and the public's distrust in vaccines, as well as dissemination of content that discourages vaccination, including *fake news*.



The spread of misinformation about COVID-19 can be explained by the lack of initial knowledge about the virus and how to deal with it, both by the scientific community and by politicians, while the population lacked quick answers about the virus. Thus, misinformation about effective treatments added to ignorance, uncertainties, and discussions about the use of masks as in France and in Brazil contributed to the dissemination of *fake news*.

## METHODOLOGY

The methodological basis of this study focuses on the *survey*-like method, which has as its principle the investigation through the questionnaire technique. The *survey* is a type of research usually of quantitative nature but may also evidence qualitative results. It is a form of data and information collection from the opinions of groups of individuals. In this respect, it is worth remembering that the guidance of the CEP - Research Ethics Committee is that opinions do not require the opening of the evaluation process and authorization of the CEP. The results found in this type of study can be extrapolated with the appropriate scientific generalizations to the entire universe under study. Thus, this study is part of an application of a self-perceived health questionnaire among frontline health professionals facing the covid-19 pandemic.

The questionnaire was applied online/digital with complete secrecy and anonymity, being disclosed by directors and managers of public or private health centers to health professionals of the front line of coping with COVID-19 in the state of Minas Gerais. The reports were analyzed by linguistically-discursively observing the image of themselves of these professionals about the health and safety of their own occupation and the impact of *fake news* on the work in these health centers.

The semi-structured questionnaire containing twenty-two questions was applied using the google forms digital platform available over a period of two months. Containing three main sections, the questionnaire was divided into questions capable of contemplating sociodemographic aspects of the sample such as age, gender and position occupied in the health area. The second section was focused on questions related to the work environment, routine, and changes in the physical and mental health of health workers. The last section



was focused on understanding the factors related to *fake news* and how they were able to impact on the day-to-day work of these professionals.

An integrative literature review (ILR) was used to develop the theoretical part of this study. This is a descriptive exploratory study of integrative review conducted during the Covid-19 pandemic. According to Mendes, Silveira & Galvão (2008), this type of study is a method of bibliographic research that allows the incorporation of scientific evidence that can be applied in clinical practice, since it gathers information from data that evaluate a particular problem or issue in question in order to update and link the main findings in an organized manner, thus promoting in-depth knowledge in its constitution.

## RESULTS AND DISCUSSIONS

Table 1 presents the profile of the professionals sampled. The results obtained through the application of the questionnaire showed a prevalence of female responses corresponding to 71.4%. The age group was more abundant between 25 and 39 years, 52.4%. Among the positions occupied by the sample, the three largest occupations were distributed in: 40.5% nursing technician, followed by 14.3% nurses and 11.9% physicians.

**Table 1** – Profile of sampled professionals

	Variable	Amount	Percentage
Sex	Feminin	30	71.4%
	Masculine	12	28.6%
Age range	18-24 years	5	11.9%
	25-39 years	22	52.4%
	40-59 years	15	35.7%
	60 years or older	0	0%
Position held	Nursing Technician	17	40.5%
	Nurse	6	14.3%
	Doctor	5	11.9%
	Nutritionist	3	7.1%

Psychologist	3	7.1%
Physical therapist	3	7.1%
Social Worker	2	4.8%
Medical Student	1	2.4%
Management consulting	1	2.4%
Board of directors	1	2.4%

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**Source:** Author's data

When asked about the time of work in the health area, acting in the front line and whether the professionals tested positive for the covid-19 at some point until the application of the questionnaire, the respective results were obtained as presented by table 2 aspects related to the work of the sample.

**Table 2** – Aspects related to the work of professionals

	Variable	Amount	Percentage
Working time in health	Less than 2 years ago	3	7.1%
	From 2 to 5 years	4	33.3%
	From 5 to 7 years	5	19%
	From 7 to 10 years	7	16.7%
	More than 10 years	10	23.8%
Frontline performance	Yes	30	71.4%
	No	12	28.6%
Tested positive for covid-19 at some point	Yes	17	40.5%
	No	25	59.5%

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**Source:** Author's data

The constant interaction with Covid-19 in its work environment shook 100% of the participating professionals. It was also verified how the participants have felt daily in their

work in relation to coping with Covid-19, in this item, psychologically shaken, disappointed and disabled, presented the highest prevalence of responses with the respective percentages: 73.8%, 42.9% and 28.6%, Table 3 - How has it felt in their work in relation to coping with Covid-19.

**Table 3** - How has it felt in their work in relation to coping with Covid-19

	Amount	Percentage
Frustrated	12	28.6%
Disappointed	18	42.9%
Disabled	10	23.8%
Psychologically shaken	31	73.8%
Indifferent	2	4.8%
Competent	3	7.1%
Hopeful	4	9.5%
Scared	1	2.4%
Tired	1	2.4%

**Source:** Authors data

Health professionals also reported more common alterations perceived during their daily lives. Stress (73.8%), Anxiety (57.1%), Sleep disturbance or change (50%), Irritability (47.6%) and Sadness (40.5%) were the most abundant variables.

**Table 4** - Most common alterations observed in daily professional life.

	Amount	Percentage
Sleep disturbance or change	21	50%
Intability	20	47.6%
Hypersensitivity	11	26.2%

Inability to relax	13	13%
Difficulty concentrating	7	16.7%
Loss of career satisfaction	9	21,4%
Loss of life satisfaction	5	11.9%
Negative feeling of the future	17	40.5%
Fear	15	35.7%
Anxiety	24	57.1%
Stress	31	73.8%
Changes in appetite weight change	15	35.7%
Sadness	17	40.5%
Frequent crying	8	19%

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**Source:** Author's data

The technical preparation of professionals was also the target of a survey where 50% of the sample stated that it was identified to prepare for coping with covid-19, followed by 33.3% trained; 11.9% disabled. Only 2.4% of the sample was considered very qualified and very disabled. These results are like studies by the Getúlio Vargas Foundation that revealed the fragility of these professionals in dealing with moments of crisis and the lack of support and support in preparing to deal with these stressors. As they therefore need to be on the front line, they may become more susceptible to illness. Continuing the perception of professionals about their work day we obtained that 76.2% said to consider very exhaustive and 90.5% of all professionals confirmed to be at the limit of exhaustion, within the literature we have research from Fiocruz that corroborates the idea of the state of exhaustion and suffering of professionals who had previously presented the pandemic a picture of illness and that with the flowering of the overload of the health system increased the worsening in the health of professionals.

In terms of valuing these professionals only 4.8% of the entire sample considered to be more valued since the beginning of the pandemic, the prevalence of the results was again concentrated in indifference corresponding to 64.3% of the participants. The structure of the workplace of these professionals was also the target of a survey where the questionnaire obtained 73.8% of the sample considering the appropriate structure and 21.4% very adequate. Discretion/prejudice proved effective in 54.8% who presented at some point in the working day having already been a victim of this respect.

Professionals considered vaccination as extremely effective to contain the progress of the pandemic and the overload of the health system corresponding to 92.7% of the sample. The performance of the media was essential to reveal the real situation experienced by health professionals since 92.9% of the sample confirmed this fact. At the same time, this same percentage was indicated as responsible for influencing the way the population faced Covid-19.

The discursive questions focused on the understanding of three main points: the representation of vaccination for health professionals; the need to review health and safety risks after pandemic period and finally the consideration of "*fake news*" about vaccination and medicines as an obstacle to the pandemic. On the representation of vaccination, many professionals stated that it is the hope and solution to the current situation experienced by the population.

Verbalization 1: "Hope to return to a normal life"

Verbalization 2: "Best solution we have today to prevent more people from living"

Regarding the risks to the health and safety of workers, the need for psychological support to professionals due to exhaustion was highlighted within the verbalizations, due to exhaustion and the others focused on the issue of structure and mental health.

*Verbalization 3: " Yes. We are all exhausted, this comes from before the pandemic the situation was no longer incredibly good, now that everything appeared and that the media we have helped, and that the population realized the severity of their actions and the reflexes for health professionals. Risks should be seen, especially psychological ones."*

*Verbalization 4: "Yes, not only the risks linked to the physical part but also risks related to mental health "*

*Verbalization 5: "Yes, we're going through a lot, now we haven't even stopped to think because the routine is very extensive, but after this is over, I think we're going to need a lot of support. "*

All the statements made by the questionnaire reveal the complexity of the health sector and the need to address the possible consequences of this exposure to an exhaustive journey, the data found here also come in line with integrative review studies such as that of Prado *et al.* (2020) that showed as well as the data found in this study, several others that associated mental health outcomes among health professionals with continuous exposure of coronavirus disease 2019. Regarding the phenomenon of *fake news*, the professionals reported the challenges of containing this information in the primary and secondary care of patients, because many of them refused to meet the recommendations of the health agencies.

*Verbalization 6: "Yes. Several patients have already arrived who insisted on information unrelated to science, such as using vinegar instead of gel alcohol. This only makes our control work difficult."*

*Verbalization 7: "Yes. And every unbelievable information that comes to us on shifts, it is difficult if the population chooses to believe in WhatsApp than we health professionals"*

*Verbalization 8: "Yes, we have to go against the common sense of most patients who get to the emergency room is very exhausting trying to convince them that not everything they read is true"*

Thus, it can also highlight the complexity of the service sector, especially in hospitals, the front line of the fight against the pandemic. Crowded ICUs and constant reports of exhaustion indicate the limit at which these professionals are constantly working and at the same time consider the importance of the collective work already raised before the Covid-19 outbreak. Authors like Patrício *et al.* (2019) that indicated a series of elements of a complex process in which strategies and anticipations arise to manage work in the hospital. At the same time, qualitative data obtained through the discursive questions observed, the phenomenon of misinformation generated by *fake news* presented itself as a great challenge for the performance of health professionals in the fight against covid-19.

For development of an integrative literature review (ILR), articles published between the years 2020 and 2022 were used. Table 5 shows the selected articles and the entire bibliography selection procedure during the integrative review. Table 5 shows a general overview of the selected articles, containing the name of the authors, the year, and the general objective of the article, to make the visualization of the selected material clearer.

This study is an exploratory descriptive integrative review study conducted during the Covid-19 pandemic. For Mendes, Silveira and Galvão (2008), this type of study is a method of bibliographic research that allows the incorporation of scientific evidence that can be applied in clinical practice, since it gathers information from data that evaluate a particular problem or issue in question in order to update and link the main findings in an organized manner, thus promoting in-depth knowledge in its constitution. To conduct this study, we followed the six operational steps described by Souza, Silva and Carvalho (2010): a) elaboration of the guiding question that guides the entire problematic addressed in the study; b) search in the scientific literature by means of descriptors previously consulted by the authors and related to the theme in question; c) collection of information necessary to substantiate the main research question d) detailed analysis of the previously selected studies aiming at their inclusion or exclusion by means of the eligibility criteria adopted; e) discussion of the main findings in the studies, aiming to better elucidate the context, highlighting the primary findings already published in the literature and finally f) presentation of the integrative review with updated content on what has already been published in recent years.

**Table 5** - Sample data collection tool for an integrative review

Author/ year	Objective	Group assignment, methods/design	Results / Conclusion
Faro <i>et al.</i> , (2020)	Gather information and research findings regarding the impact of such crises on mental health. The paper presents questions related to the emergence of mental health care, both the one provided by Psychology and the one that can be developed by other health professionals, to minimize the negative impacts of the crisis and act preventively.	Descriptive	<p>Concepts were exposed for a clearer understanding of the scenario triggered by COVID-19, as well as issues related to problems in the mental health field, protective factors in the development of mental disorders, and examples of interventions at contrasting times of the pandemic.</p> <p>The intervention performed by mental health professionals in this public must be done early, aiming to reduce the anguish, tension, and stress related to the actual or potential disease, seeking also to stimulate adherence to the necessary protective measures for themselves and against the spread of the virus</p>



Wu <i>et al.</i> , (2020).	Investigating the possible an etiological agents associated with this disease	Observational	The PDB files of the predicted protein structures were displayed and compared with the crystal structures of the spike RBD of SARS-CoV (PDB 2GHV)43 and the crystal of structure of the spike RBD of SARS-CoV complexed with human ACE2
Teixeira <i>et al.</i> (2020)	Systematizing a set of scientific evidence presented in international articles that identify the main problems affecting health professionals directly involved in facing the pandemic of COVID-19 and point out actions and strategies for the protection and health care of these professionals	Descriptive	It is worth reaffirming the recommendations of the WHO regarding the support that the general population can give to health professionals and workers. For the health professionals who are on the front lines of the fight against the pandemic, a necessary stimulus is the recognition of the effort, even the sacrifice that many are making to continue working in the conditions in which they work. Knowing that their family is safe, their friends and society value their work is fundamental for them to be able to face with courage and hope the challenging task in which they are engaged.
Vedovato <i>et al.</i> (2021)	Analyzing the working conditions of health professionals working in the pandemic of COVID-19, in Brazil, based on reports published on the Internet by journalistic communication vehicles.	Observational	The pandemic scenario makes evident the primordial need for public investment in the care of those who oversee the care for the population.
Gleriano <i>et al.</i> (2020)	Reflecting on the health management of the Brazilian National Health System (SUS), from the perspective of challenges and possibilities to overcome coordination gaps in facing COVID-19.	Descriptive	This study emphasizes the relevance of the regulatory management authority in SUS for coordination and its organizational potentiality in providing better conditions for care, however, it is understood that it is necessary to review the territoriality, planning and work process, as constituent elements of health surveillance.
Couto <i>et al.</i> (2021)	Discuss the paradox and contradictions of the individual-society relationship in the context of covid-19 considering vaccine hesitancy as a	Descriptive	Individual responsibility, with the consequent blaming of subjects, resulting from reductionist preventive strategies that do not consider the complexities of the present time, can reinforce

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	historically and socially situated phenomenon. This essay points out that decision-making about (not) vaccinating or (not) following preventive and control measures for the spread of covid-19 are shaped by social belongings and traversed by inequalities that tend to be exacerbated.		stereotypes and prejudices by not considering the intersections of gender, race/color, class, generation, and other social markers that inform "choice" and "care" in health. At the societal level, the response to the epidemic and its success calls for actions and commitments from institutions, organizations, and governments in formulating public policies, ensuring socioeconomic security, and assisting the most vulnerable groups. In addition, effective government policy actions must be based on the best available evidence.
Rodrigues & Azevedo (2020)	This study emphasizes the political-institutional obstacles existing in our Federative Pact, anchored in the functioning of Brazilian cooperative federalism. It is argued that an effective fight against the pandemic is made, necessarily, by the articulation between the federative entities guided by the Union, with plans of action and implementation defined by managers at local scales.	Descriptive	If the spread of the coronavirus exposes numbers and statistics that characterize a phenomenon of global dissemination, it is in the framework of the contradictions and the political and institutional fragility of the Federation and the Brazilian governments that we experience the confrontation of the pandemic. In this scenario, the gaps in our federative pact, associated with the conflicts of political-party interests that are anchored in different scales of power, seem to cloud the processes of decision-making and republican actions to confront the virus.
Campos, Machado & Girardi (2020).	This article examines the problem of maldistribution of physicians and describes some strategies and programs designed by some countries to fight the problem.	Descriptive	It would be a mistake to imagine that the existence of a framework of federal workers municipalities in situations of severe and persistent and persistent deprivation of health professionals should discourage municipalities from continuing their efforts to pursue their efforts of professional.
Poland and Jacobson (2020)	Examining the current anti-vaccine movement and providing current examples. Finally, a review of suggestions for dealing with the anti-vaccine movement will be presented.	Observational	The controversy and alarm caused by anti-vaccine groups has a demonstrable detrimental effect on population level vaccine coverage rates. This, in turn, increases the burden of human suffering, increases health care costs, consumes resources otherwise useful for a productive economy,

			and finally, compounds the problem by putting other individuals and groups at risk.
Lai <i>et al.</i> (2020)	To assess the magnitude of mental health outcomes and associated factors among health care workers treating patients exposed to COVID-19 in China	Observational	In this survey of healthcare workers in hospitals equipped with fever clinics or wards for patients with COVID-19 in Wuhan and other regions in China, participants reported experiencing psychological burden, especially nurses, women, those in Wuhan, and frontline health care workers directly engaged in the diagnosis, treatment, and care for patients with COVID-19.
Bosco <i>et al.</i> (2020)	To identify prevalence and factors associated with anxiety and depression in nursing professionals who work to cope with COVID-19 at a university hospital.	Observational	Must be considered the impact on mental health nursing caused by COVID-19 and intervene with coping strategies to minimize the suffering of professionals.
Braga (2018)	The purpose of this article was to provide answers to some still controversial questions about fake news.	Observational	The phenomenon of fake news is consolidated throughout the world, being a strong indication that the reason for its consolidation is beyond cultural characteristics, which is why It is possible to explain the theories in which the development of ideas leads to confirmation and cognitive dissonance applied to political discourses.
Júnior <i>et al.</i> (2020)	The article aims to investigate the interest of the Brazilian population for information on the subject and analyze the spread of Fake News related to this topic in the main virtual social networks in the context of the coronavirus pandemic in Brazil.	Descriptive	The results point to a growing interest of the population in seeking information about the term and the fight that has been conducted not only by the Brazilian Ministry of Health, but also by traditional media vehicles for the perpetuation of Fake News on the internet.
Neto <i>et al.</i> , (2020)	This release aims to address Fake News in the Brazilian context of COVID-19. Development: In the period between January 29th and March 31st, 2020, a search was	Descriptive	The literature on the topic may be scarce; however, it is observed that the speed of Fake News production is relevant, especially when

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	<p>carried out in the Brazilian Ministry of Health's database, and 70 Fake News on COVID-19 were identified, namely: 40 pieces of information related to the statements of health authorities, 17 about therapy, nine with preventive measures, two regarding the prognosis of the disease and two regarding vaccination.</p>		<p>assuming their social impact and spread capacity.</p>
Galhardi <i>et al.</i> , (2020)	<p>This paper aims to present an analysis of the most widespread fake news about the New Coronavirus (Sars-CoV-2) on social networks and how it can harm public health.</p>	Experimental	<p>The dissemination of malicious content related to Covid-19 contributes to the discrediting of science and global health institutions, and the solution to this problem is to increase the level of adequate information for Brazilian society.</p>
Soares <i>et al.</i> (2020)	<p>The article aims to analyze, from publications on the Federal Nursing Council website, the lexicon related to the theme of "Fighting the infodemic during the Covid-19 pandemic". Method: qualitative research of the documentary type, whose primary sources were reports and news published on the Federal Nursing Council website during the 2020 Nursing Week. Data was processed in the IRAMUTEQ® software. By means of the Descending Hierarchical Classification, the most frequent lexicon of the class that deals with the investigated theme was identified and it was processed from the word cloud.</p>	Observational	<p>The excess of information during the pandemic has caused disinformation, since many of the contents that circulate on social networks are inaccurate or false data, which hinders access to the legitimate information that the population and health professionals need at the current moment of the pandemic</p>
Lana <i>et al.</i> , (2020)	<p>Reporting information on the new coronavirus emergency (SARS-CoV-2) and the role of timely and</p>	Observational	<p>The increasingly frequent emergence of novel diseases requires restructuring the way diseases are reported in the country. It is necessary to invest in a new Brazilian Information System for</p>

	effective Brazilian health surveillance.		Notifiable Diseases (SINAN), based on more modern technologies both to facilitate notification and to allow speedier data dissemination and analysis, in keeping with the principles of precision epidemiology.
Insanguine Mingarro & Claramunt (2021)	Contextualized reports of medical complications to get the vaccine highlight the presence of other problems, such as the disclosure of Fake news that add difficulties to overcome the global problem, namely its incidence in the field of anti-vaccine movements, developed, especially in Italy, in recent years.	Observational	It is concluded that in addition to the medical complications to get the vaccine highlights the presence of other problems, such as the disclosure of Fake news that add difficulties to overcome the global problem, especially by its incidence in the context of anti-vaccine movements, developed, especially in Italy, in recent years.
Matos <i>et al.</i> (2020)	This commentary article discusses the impacts of the covid-19 pandemic on immunization programs in Brazil.	Descriptive	Considering advances (and notability) of Brazil's national immunization program, established in the 1970s, the programs face challenges, such as the recent drop-in vaccine uptake rates. In addition to this health crisis, there is also Brazil's current political crisis, which will undoubtedly require assistance from researchers, policymakers, and society to be fixed.
Montagni <i>et al.</i> (2021)	This study aimed to investigate the relations between intention to get vaccinated against the SARS-CoV-2 and the ability to detect fake news about Covid-19 as well as health literacy among a population-based sample of French adults.	Experimental	To promote acceptance of a vaccine against SARS-CoV-2, it is recommended to increase individuals' ability to detect fake news and health literacy through education and communication programs.
Patrício <i>et al.</i> (2019)	This article aims to identify the needs and possibilities of anticipation, regulation and the variabilities present in the activity of a nursing team, as well as the individual and collective strategies that	Experimental	It is necessary to construct individual and collective strategies to deal with psychiatric patients (processes of production and updating of knowledge).

arise to manage elements  
in the work context.

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**Source:** Author's data.

The search key used for the selection of articles was: (Covid-19) AND (health professionals) AND (vaccination), in the selected databases: Psychnet 12 (results), Scielo 4 (results) and Science Direct 77 (results). The interval of years was from 2020 to 2021, the pandemic period. The filters applied were review articles, research articles, articles with vaccination in the title. The inclusion criteria were articles that answered the guiding question; articles that addressed the Brazilian vaccination system; articles that addressed the health and safety of health professionals; articles that addressed COVID-19 and vaccination against the disease; articles that addressed mental illness. And as exclusion criteria: articles that addressed other types of professionals; articles that addressed other aspects of COVID-19; articles that did not address COVID-19; articles in other languages. The languages selected were: English and Portuguese. All articles presented in Table 5 focus on COVID-19 and point to the need to inform the population about the fake News propagated during the pandemic. Many of them point out that the fake News harmed the work in hospitals and health centers. In addition, they also highlight the need for programs to value and care for health professionals.

## FINAL CONSIDERATIONS

The discursive analysis of the image of oneself in front of the discourses allowed to highlight the effort that is being made by health professionals and workers to contain deaths by covid-19, to take care of infected patients and to prevent the collapse of the health system even at the limit of exhaustion. The results obtained in view of the treatment of data related to working conditions, valorization of the profession and perceived changes in terms of physical and mental health highlight the importance of these workers and the collective work active to emerge regulations and forces to contain the progress of the pandemic.

Regarding the phenomenon of *fake news*, this research showed how the discourses of the population were a complicating factor in combating the pandemic and in the execution of primary and secondary care of professionals. The media reports proved decisive to assist

in the development of communication strategies to reach the population in terms of valuing the public health care system and individual measures to contain the disease. The importance of conducting future research related to the post-pandemic impacts on these professionals and on the behavior of the population in the face of protection discourses, psychological support and actions aimed at preventing and improving the health and safety situation is also essential to overcome all the problems generated by the pandemic and to support professionals in the face of the task to which they are engaged.

## REFERENCES

- BOSCO E.B; FLORIANO L.S.M; SKUPIEN S.V; ARCARO G; MARTINS A.R; ANSELMO. A.C.C. Mental Health nursing in coping with COVID-19 at a regional university hospital. **Rev. Bras. Enferm.** 2020, 73 (Supl.2) e. 20200434.
- BRAGA R.M.C. A Indústria das Fake News e o Discurso de Ódio. In: PEREIRA, R. V. (org.) Direitos Políticos, Liberdade de Expressão e Discurso de Ódio. Belo Horizonte: **IDDE**, 2018. p. 203-220.
- BRASIL. Coronavírus. Ministério da Saúde. 2021. <http://www.coronavirus.saude.gov.br>. Acesso em: 05 out. 2021.
- CAMPOS F.E; MACHADO M.H; GIRARDI S.N. A fixação de profissionais de saúde em regiões de necessidades. **Divulg Saúde debate** [Internet]. 2009 [citado 2020 jan 30]; 44:13-24. [http://www.cnts.org.br/public/arquivos/Artigo\\_Campos.pdf](http://www.cnts.org.br/public/arquivos/Artigo_Campos.pdf)
- COUTO, M.T; BARBIERI, C.L.A; MATOS, C.C.S.M. Considerações sobre o impacto da covid-19 na relação indivíduo-sociedade: da hesitação vacinal ao clamor por uma vacina. Artigos originais, **Saude soc.** 30 (1) • 2021
- FARO A; BAHIANO M.A; NAKANO T.C; REIS C; SILVA B.F.P; VITT L.S. COVID-19 e saúde mental: a emergência do cuidado. *Estud. Psicol.*, Campinas, v.37, e200074, 2020.
- GALHARDI C.P; FREIRE N.P; MINAYO, M.C.S. Fato ou Fake? Uma análise da desinformação frente à pandemia da Covid-19 no Brasil. **Ciênc. saúde coletiva**, Rio de Janeiro, v. 25, supl. 2, p. 4201-4210, Oct. 2020.
- GLERIANO J.S; Fabro G.C.R; TOMAZ W.B; GOULART B.F. Reflexões sobre a gestão do Sistema Único de Saúde para a coordenação no enfrentamento da COVID-19. *Reflexão. Esc. Anna. Nery* 24 (spe) • 2020
- HANKIVSKY O; KAPILASHRAMI A. Beyond sex and gender analysis: An intersectional view of the COVID-19 pandemic outbreak and response. University of Melbourne. Retrieved July 9, 2020. [https://mshgh.unimelb.edu.au/\\_\\_data/assets/pdf\\_file/0011/3334889/Policy-brief\\_v3.pdf](https://mshgh.unimelb.edu.au/__data/assets/pdf_file/0011/3334889/Policy-brief_v3.pdf)
- INSANGUINE MINGARRO, Ferdinando; CASTELLANOS CLARAMUNT, Jorge. COVID-19,'fake news'y vacunación: la necesidad de inmunizar a la sociedad de la duda vacunal. **Cuadernos de Bioética**, 2021, num. 104, p. 63-73, 2021. doi: [10.30444/CB.88](https://doi.org/10.30444/CB.88).
- LAI, Jianbo *et al.* Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA network open*, v. 3, n. 3, p. e203976-e203976, 2020.JUNIOR J.H.S; RAASCH M; SOARES J.C; RIBEIRO L.V.H.A.S. Da Desinformação ao Caos: uma análise das Fake News frente à pandemia do Coronavírus (COVID-19) no Brasil. **Cadernos de Prospecção** – Salvador, v. 13, n. 2, Edição Especial, p. 331-346, abril, 2020.



- LAI J, Ma S, WANG Y, CAI Z, HU J, WEI N, *et al.* Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. **JAMA Netw Open.** (2020) 3:e203976. 10.1001/jamanetworkopen.2020.3976
- LANA R.M; COELHO F.C; GOMES M.F.C; CRUZ, O.G; BASTOS L.S; VILLELA D.A.M; CODEÇO C.T. Emergência do novo coronavírus (SARS-CoV-2) e o papel de uma vigilância nacional em saúde oportuna e efetiva. **Cad. Saúde Pública**, Rio de Janeiro, v. 36, n. 3, e00019620, 2020.
- MATOS C.C.S; BARBIERI C.L.A; COUTO M.T. Covid-19 and its impact on immunization programs: reflections from Brazil. **Revista de Saúde Pública**, 2020, 54:114. doi:[10.11606/s1518-8787.2020054003042](https://doi.org/10.11606/s1518-8787.2020054003042).
- MENDES, K.S; SILVEIRA, R.C.C.P.; GALVÃO, C.M. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. **Texto & Contexto - Enfermagem**, v. 17, n. 4, p. 758-764, 2008.
- MONTAGNI I.; OUAZZANI-TOUHAM K; MEBARKI A; TEXIER N.; SCHÜCK S.; TZOURIO C, Confis group. Acceptance of a Covid-19 vaccine is associated with ability to detect fake news and health literacy. **J Public Health.** 2021, mar. doi: [10.1093/pubmed/fdab028](https://doi.org/10.1093/pubmed/fdab028).
- NETO, Mercedes *et al.* Fake news no cenário da pandemia de Covid-19. **Cogitare enfermagem**, v. 25, 2020.
- PATRICIO J.S; Calvo D.S.C; MENDES D; MORAES G. A importância do trabalho coletivo na gestão dos riscos do/no trabalho em saúde. **Revista Sustinere**, Rio de Janeiro, v.7, p 301-323, jul-dez, 2019.
- POLAND, G. A.; JACOBSON, R. M. Understanding those who do not understand: a brief review of anti-vaccine movement. **Vaccine, Kidlington**, v. 19, n. 17-19, p. 2440-2445, 2001.
- PRADO A.D; PEIXOTO B.C; SILVA A.M.B.S; SCALIA LAM. A saúde mental dos profissionais de saúde frente à pandemia do COVID-19: uma revisão integrativa. **REAS/EJCH** | Vol.Esp.46 | e4128 doi: <https://doi.org/10.25248/reas.e4128.2020>.
- RODRIGUES J.N; AZEVEDO D.A. Pandemia do Coronavírus e (des)coordenação federativa: evidências de um conflito político-territorial. **Espaço e Economia**. 2020 abr;18(18):1-11. <https://doi.org/10.4000/espacoeconomia.12282>
- SOARES, Samira Silva Santos *et al.* Brazilian nursing in the fight against the infodemic during the covid-19 pandemic. **Cogitare enferm**, p. e74676-e74676, 2020.
- SILVA A.G. D; MIRANDA D.M; DIAZ A.P.; TELES A.L.S; MALLOY-DINIZ L.F; PALHA A.P. Mental health: why it still matters in the midst of a pandemic. **Braz J Psychiatry**, 2020 May-Jun;42(3):229-231. <https://doi.org/10.1590/1516-4446-2020-0009>
- TEIXEIRA C.F.S; SOARES C.M; SOUZA E.A; LISBOA E.S; PINTO I.C.M; ANDRADE. R.D; ESPIRIDÃO MA. A saúde dos profissionais de saúde no enfrentamento da pandemia de Covid-19. **Ciência coletiva**, Rio de Janeiro, v. 25, n. 9, p. 3465-3474, **Sept.** 2020.
- VEDOVATO T.G; ANDRADE C.B; SANTOS A.D.L; BITENCOURT M; ALMEIDA L.P; SAMPAIO J.F.S. Trabalhadores(as) da saúde e a Covid-19: condições de trabalho à deriva. **Rev. bras. saúde ocup.** 46, 2021. <https://doi.org/10.1590/2317-6369000028520>.
- WHO. Assessment report of the global vaccine action plan strategic advisory group of experts on immunization. Report of the sage working group on vaccine. 2014. <https://www.who.int>
- WU, Fan *et al.* A new coronavirus associated with human respiratory disease in China. **Nature**, v. 579, n. 7798, p. 265-269, 2020. <https://doi.org/10.1038/s41586-020-2008-3>.



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