

# Prevalence and Worsening of Anxiety Disorders in Health Professionals in the COVID-19 Pandemic

## Prevalência e Agravamento de Transtornos de Ansiedade em Profissionais de Saúde na Pandemia de COVID-19

Rafael Martins Gomes<sup>a</sup>; Luísa de Souza Maurique<sup>a</sup>; Gabriele Winter Santana<sup>a</sup>; Lara Vasconcelos Normando<sup>a</sup>; Isabella Scalabrini Ferrari<sup>a</sup>; Francisco Wilker Mustafa Gomes Muniz<sup>\*b</sup>

<sup>a</sup>Associação de Psiquiatria Cyro Martins. RS, Brasil.

<sup>b</sup>Universidade Federal de Pelotas, School of Dentistry, Department of Periodontics. RS, Brasil.

\*E-mail: wilkermustafa@gmail.com

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### Abstract

The COVID-19 pandemic is a public health problem, which has serious consequences for health professionals, especially for those who work in direct care, such as nurses. The repercussions can be observed not only in physical health, but also in mental health, such as the emergence of mental disorders. Therefore, the present study aimed to reflect on the prevalence and worsening of anxiety disorders in health professionals in the context of the COVID-19 pandemic. To do so, an integrative review of the literature was performed, searching in the databases of PubMed, Medline and Lilacs, through DeCS/MeSH descriptors and application of inclusion and exclusion criteria. From the analysis and interpretation of the data, it was concluded that the prevalence of anxiety disorders increased during the pandemic, mainly among women, as they accumulate responsibilities in the workplace and in the domestic environment. Greater mental overload was observed among workers who performed activities in places unsuitable for dealing with the pandemic state. Significantly higher self-reported symptoms of anxiety and depression were observed among those professionals who reported concern about the pandemic. In addition, this problem was common among professionals who were on the front lines of the fight against COVID-19, that is, in direct contact with people with the virus, which caused fear of contamination and death.

**Keywords:** Health Personnel. Mental Health. Pandemics.

### Resumo

*A pandemia de COVID-19 é um problema de saúde pública que trouxe consequências graves para os profissionais de saúde, principalmente para aqueles que atuam no cuidado direto, como as enfermeiras. As repercussões podem ser observadas não somente na saúde física, mas também na saúde mental, como o surgimento de transtornos mentais. Diante disso, o presente estudo teve como objetivo refletir sobre a prevalência e agravamento de transtornos de ansiedade em profissionais de saúde no contexto da pandemia de COVID-19. Para isso, adotou-se como metodologia a revisão integrativa de literatura, realizando buscas nas bases de dados PubMed, Medline e Lilacs, a partir do uso de descritores DeCS/MeSH e aplicação de critérios de inclusão e exclusão. Após a análise e interpretação dos dados, concluiu-se que a prevalência de transtornos de ansiedade aumentou durante a pandemia, principalmente entre as mulheres, especialmente por essas acumularem tanto responsabilidades no ambiente de trabalho como no ambiente familiar. Maior sobrecarga mental foi observada naqueles trabalhadores que exercem atividades em locais inadequados para lidar com o estado pandêmico. Significativos maiores sintomas autorreportados de ansiedade e depressão foram observados naqueles profissionais que reportaram preocupação com a pandemia. Além disso, o referido problema foi comum entre os profissionais que estiveram na linha de frente do combate à COVID-19, isto é, no contato direto com pessoas com o vírus, o que causou medo de contaminação e da morte.*

**Palavras-chave:** Saúde Mental. Pandemia. Pessoal de Saúde.

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### 1 Introduction

Global public health has been facing one of the biggest challenges ever in history: the COVID-19 pandemic. The first cases were reported as pneumonia of unknown cause, which occurred in the city of Wuhan in China in December 2019. In January of the following year, the virus (SARS-CoV-2) was identified in other regions of China. In February, Brazil declared the State of Emergency Public Health of National Importance (ESPIN), having its first case confirmed on the 26 of the same month<sup>1</sup>.

On March 11th, 2020, the World Health Organization (WHO) changed the global epidemic classification and declared the COVID-19 pandemic. 517,097,886 of infected

people have already been registered in the world, and in Brazil, 30,558,530 contaminated people and 664,126 deaths have already been confirmed (data referring to epidemiological week no. 18, from May 8th to May 14th, 2022)<sup>1</sup>.

The high rate of morbidity and mortality caused by the COVID-19 pandemic required the performance of several health professionals in the services, mainly hospital, who living moments of insecurity and fear, suffered several repercussions, among them the emergence of anxiety disorders. About 3.5 million health professionals acted as direct caregivers in hospitals, dealing with work overload, lack of inputs and individual protection equipment (PPE), essential for their safety during the care provided. According

to the World Health Organization (WHO), health professionals have developed high levels of anxiety, depression and stress, associated with the risk of getting sick, generating impacts on mental health and an increase in the development of anxiety disorders<sup>2</sup>.

Anxiety disorder is an emotional dysfunction that causes serious problems in the person's life and is recognized as a pathology. There are two points that intersect: the physical and psychic symptoms that occur through the psychological characteristics of the individual<sup>3</sup>.

Anxiety is characterized by an unpleasant and vague feeling of fear and apprehension, including tension and/or discomfort derived from the feeling of alert or danger over an unknown situation. Anxiety is necessary in some situations for the good performance and development of some tasks, it is short-lived and related to momentary stimuli or not. It may be considered a clinical trait when it is exacerbated and disproportional to the stimulus, classifying it as Generalized Anxiety Disorder, or anxiety disorder<sup>4</sup>.

Feeling fear and anxiety in the face of a new situation experienced is normal, however, it is necessary to establish a noticeable difference between normal and pathological. From the perspective of Presoto et al.<sup>5</sup>, anxiety can be defined as the aversion that exists through the presence of some degree of uncertainty in the face of a particular situation. In addition, the authors also argue that anxiety is expressed through subjective feelings of tension, apprehension, nervousness and concern, and may manifest through physical signs or symptoms.

In this way, it is possible to understand that anxiety is necessary for the human being to be in a state of alert regarding possible situations of danger, but when the situation becomes stable and permanent, the continuity of anxiety can have a negative impact or generate discomfort in people's lives. Faced with these challenges, this study aimed to reflect on the prevalence and worsening of anxiety disorders in health professionals in the context of the COVID-19 pandemic.

## 2 Material and Methods

Taking into account the objectives of this research, which seeks to analyze the scientific production on the prevalence and worsening of anxiety disorders in health professionals in the context of the COVID-19 pandemic, this study aimed to conduct an integrative literature review, in which the results of the research on this subject were gathered and synthesized. This type of review corresponds to a research method that allows the search for knowledge and evaluation of them to acquire evidence on the subject researched<sup>6</sup>.

The integrative review was carried out from August to October 2022, and involved the development of six stages, as proposed by Souza, Silva and Carvalho<sup>7</sup>. Namely: 1st: Identification of the theme and selection of the research question; 2nd: Establishment of inclusion and exclusion criteria; 3rd: Identification of pre-selected and selected studies;

4th: Categorization of the selected studies; 5th: Analysis and interpretation of results; 6th: Presentation of the review and synthesis of knowledge.

In the first stage, the research theme and the guiding question were identified so that it could be determined the articles that would integrate the study in question, the resources to be used for the identification of these articles and the data of each selected research that could integrate the review. The guiding question for this research was: "How was the prevalence and worsening of anxiety disorders in health professionals configured in the context of the COVID-19 pandemic?"

As sampling criteria present in the second stage, inclusion and exclusion criteria were used, aiming to ensure the representativeness of the sample and valuing indicators of reliability and reliability of the results. For this research, the following inclusion criteria were adopted: articles that answer the guiding question of this research; articles available in full and free of charge. In addition, the articles should be observational, have applied any tool to measure any mental health condition, such as stress, anxiety and depression, and have involved any health professionals. The exclusion criteria were: duplicate articles.

In the third stage, data were collected in the electronic databases Public/Publisher Medline (PubMed), Medical Literature Analysis and Retrieval System Online (Medline) and Latin American and Caribbean Literature in Health Sciences (Lilacs). For this research, we used the crossing of the following descriptors, using the boolean AND connector in all electronic consultations, according to health terminology consulted in the Health Science Descriptors (DeCS): "transtornos de ansiedade", "profissionais de saúde" and "COVID-19". Adaptations for the English language were made in the PubMed database.

The following variables were extracted from the included articles: author, year of publication, title of the work, objective, applied methodology, main results. In the fourth stage, a thorough evaluation of the selected studies of the integrative review was carried out. In this perspective, a more detailed reading of the content in full of the articles that make up the final sample was carried out, to extract relevant information.

In the fifth stage, the results of the included studies were interpreted, conducting the discussion of their results. From this step, suggestions and recommendations are addressed for future research on the subject. Finally, in the sixth stage, the presence of the evidence acquired within this process was observed, and the information acquired in this review was described. In this sense, the presentation of the results obtained occurred in a descriptive way, showing only the data considered most relevant to the present study. Then, the discussion of the results was carried out, respecting the integrity of the articles and the copyright, and there was no modification of the content found.

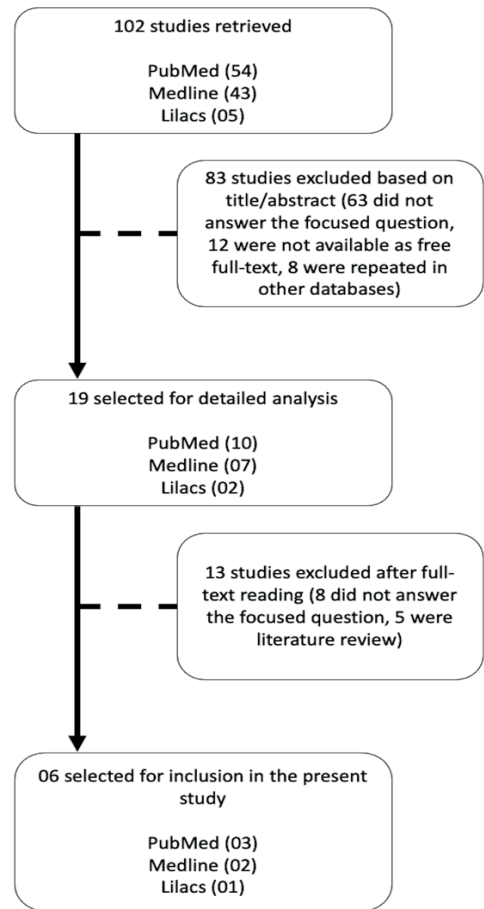
### 3 Results and Discussion

102 publications were identified, among which, after applying the inclusion and exclusion criteria, 19 publications were found: 10 in PubMed, seven in Medline and two in Lilacs. Of these, eight did not answer the guiding question and 5 corresponded to integrative reviews. After the refinement of the data found in the literature, six articles were selected for the integrative review. The flowchart of the inclusion process of the studies is described in Figure 1. The main methodological characteristics and results are laid down in Table 1.

In the investigation carried out by Guiland et al.<sup>8</sup>, there was a prevalence of depression and anxiety symptoms especially in female health professionals during the COVID-19 pandemic. As reasons for this, the authors pointed to genetic variables and social aspects related to gender. In this sense, the understanding of the role of women in society stands out, which can result from social, psychological and behavioral changes, combined with the working day and the need to care, at the same time, for professional and domestic activities. Thus, there is excess of work and exposure to health risks as factors for mental illness.

According to Guiland et al.<sup>8</sup>, other groups that had mental health compromised during COVID-19 were workers who started to have direct contact with people diagnosed with the condition, and those who experienced social isolation. In these groups, the fear of contamination by the virus was decisive, especially when it was necessary to continue professional performance in person.

**Figure 1** – Flowchart of the selection of studies included in the integrative review – August/2022



Source: research data.

**Table 1** – Distribution of the results of the selected articles

Author	Aim	Study Design	Main Results
Guiland et al. <sup>8</sup>	To evaluate the prevalence of depressive and anxiety symptoms in a sample of Brazilian workers of several segments during the COVID-19 pandemic.	Cross-sectional	There is significant association between the outcome of symptoms of anxiety and depression of two independent variables: contact with diagnosed individuals with COVID-19 and feeling worried regarding the pandemic (RR: 1.40; p=0.005; RR: 3.31; p=0.003).
Silva-Costa <sup>9</sup>	To analyze the association between perception of sickness risk by COVID-19 and symptoms of depression, anxiety and stress in those working in healthcare units.	Cross-sectional	The results of crude and adjusted regression models showed that a higher perception of sickness risk by COVID-19 was associated with the three symptoms: depression, anxiety and stress. The workers classified as higher perception of sickness risk by COVID-19 had OR elevated for mild (OR: 2.01), moderate (OR: 2.73) and severe anxiety (OR: 4.35) compared to those with lower perception risk (p<0.05).
Coelho et al. <sup>10</sup>	To identify the symptoms of anxiety and associated factors among healthcare professional during the COVID-19 pandemic.	Cross-sectional	To show symptoms of COVID-19 was associated with symptoms of anxiety (OR: 1.196; p<0.001). Another factor associated with symptoms of anxiety was seeking patients with COVID-19 (OR: 1.052; p<0.001). Therefore, the COVID-19 pandemic brings additional psychological burden for healthcare professional. Thus, it important to seek strategies to protect and promote the psychological well-being of these individuals during the pandemic.
Ribeiro et al. <sup>11</sup>	To estimate the prevalence of symptoms of anxiety and depression with related factors, among nursing workers of a maternity place during the COVID-19 pandemic.	Observational study	High prevalence of anxiety and depression among the participants was identified regardless of being in the frontline of the pandemic (40.2% and 18.8%; p=0.01) or not (50% and 38.6%; p=0.01). This situation requires receptions of the mental health demands.
Dantas et al. <sup>12</sup>	To estimate the prevalence and associated factors of anxiety among healthcare multiprofessional residents during the COVID-19 pandemic.	Cross-sectional	It was verified a higher level of proportion of moderate/severe anxiety in younger residents (85.71%; p=0.004), and also among residents that need psychological support during the residence entrance (61.90%; p=0.001).
Santos et al. <sup>13</sup>	To analyze the prevalence of symptoms of depression, anxiety and associated factors in nursing workers during the COVID-19 pandemic.	Cross-sectional	The occurrence of suggestive symptoms of mental health problems (anxiety and depression) was associated with being of brown skin color (PR: 1.23; p=0.048); working in the private sector (PR: 1.70; p=0.001) and symptoms of Burnout syndrome (PR: 2.07; p<0.001). The occurrence was more accentuated when the working places did not have adequate setting to deal with the COVID-19 pandemic (PR: 2.12; p<0.001).

Legend: OR: odds ratio; PR: prevalence ratio; RR: relative risk.

Source: research data.

Silva-Costa et al.<sup>9</sup>, in their study, also verified the mental illness of health professionals due to direct contact with patients infected with COVID-19. Therefore, they pointed out the need to monitor these professionals, aiming at their well-being, which, according to the authors, did not happen in the Brazilian reality due to the fragile alignment with the recommendations of WHO and late vaccination. These aspects worsened the mental suffering of health professionals, especially due to the permanent feeling of risk of contamination, and the risk to life itself. For Silva-Costa et al.<sup>9</sup>, such challenges pointed to the need to adopt health prevention strategies.

Anxiety problems in health professionals were also identified by Coelho et al.<sup>10</sup>, manifested by both physical and psychological symptoms. The authors observed that the professionals were frightened and unable to relax because of the fear of contamination and death. This contributed to the uncertainty about healing, high contamination rates and the fear of transmitting the disease to friends and family.

As in previous studies, Coelho et al.<sup>10</sup> noted that direct contact with people infected with the virus was a factor associated with anxiety symptoms. In addition to this vulnerability suffered by health professionals, the disturbing working conditions were also highlighted as risk aspects for psychological changes and consequent mental illness.

Ribeiro et al.<sup>11</sup> noticed symptoms of depression and anxiety both in health professionals who were in direct contact with people infected with COVID-19, and in those who did not deal daily with these patients, with a higher prevalence among the former ones. As noted in Guillard et al.<sup>8</sup>, there were more common cases of anxiety and depression in female professionals.

Ribeiro et al.<sup>11</sup> corroborate the results of Silva-Costa et al.<sup>9</sup> when registering the need to maintain and strengthen the mental health conditions of health professionals in the context of COVID-19 as a relevant factor to improve the working conditions and psychological care of these professionals, consequently promoting the relief of the impacts of mental illness and the management of emotions.

In the study carried out by Dantas et al.<sup>12</sup>, it was also evident the development of anxiety disorders in health professionals who were at the forefront of the fight against COVID-19 virus. The authors also observed a higher prevalence of anxiety in professionals who expressed the need for psychological follow-up, the use of psychoactive drugs, and in those younger.

In Santos et al.<sup>13</sup>, a high prevalence of severe symptoms of depression and anxiety was observed among health professionals whose performance occurred in medium and high complexity services in the context of the COVID-19 pandemic. As prevention factors, this study pointed to the habit of dialogue with friends and family about the experience of coping with the pandemic. In addition, the improvement of

working conditions and the incentive to the development of physical activities were identified as beneficial for the mental health of health professionals.

### 3 Conclusion

In order to reflect on the prevalence and worsening of anxiety disorders in health professionals in the context of the COVID-19 pandemic, an integrative literature review was carried out, which gathered six studies. From these, it was possible to observe that health professionals were one of the populations most affected by the pandemic.

Based on the analysis and interpretation of the data extracted from these studies, published between the years 2021 and 2022, it was concluded that the prevalence of anxiety disorders increased during the pandemic, and was higher among women, especially because they accumulate responsibilities in the work environment and in the family environment. In addition, this problem was common among professionals who were at the forefront of the fight against COVID-19, that is, in direct contact with people infected by the virus, which caused the fear of contamination and death.

It is understood that new studies on the subject need to be carried out in order to deepen the knowledge about the factors that interfere with the mental health of health professionals, especially because the COVID-19 pandemic is a recent phenomenon. With this, new scientific evidence can be produced relevant to the enrichment of the work of these professionals.

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