# Mental Health and Psychological Assessment During the COVID-19 Pandemic: Systematic Review

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**ABSTRACT** – This study aimed to identify the effects of the COVID-19 pandemic on the mental health of adult populations and verify the assessment resources employed. From a systematic review according to PRISMA recommendations, 1,158 articles were identified in the databases Pubmed, PsycINFO, PePSIC and Scielo, of which 54 met the eligibility criteria for analysis. The populations surveyed included adults in general, health professionals and elderly adults; symptoms of anxiety and depression were the most reported; there was expressive diversity in the assessment resources applied *on-line*. Prevention policies, promotion of mental health for the most vulnerable populations, as well as the development of evaluation tests with evidence of validity for *on-line* application, are a pressing reality.

**KEYWORDS:** Psychic states, Adults, Psychological assessment, Health professionals, Aged

## Saúde Mental e Avaliação Psicológica Durante a Pandemia de COVID-19: Revisão Sistemática

**RESUMO** – Este estudo teve como objetivo identificar os efeitos da pandemia de COVID-19 na saúde mental de populações adultas e verificar os recursos de avaliação empregados. A partir de uma revisão sistemática, segundo as recomendações do PRISMA, foram identificados 1.158 artigos nas bases de dados Pubmed, PsycINFO, PePSIC e Scielo, dos quais 54 atenderam aos critérios de elegibilidade para análise. As populações pesquisadas contemplaram adultos em geral, profissionais de saúde e adultos idosos; sintomas de ansiedade e depressão foram os mais relatados; houve expressiva diversidade nos recursos de avaliação aplicados on-line. Políticas de prevenção, promoção de saúde mental para populações mais vulneráveis, assim como o desenvolvimento de testes de avaliação com evidências de validade para aplicação on-line, são uma realidade premente.

**PALAVRAS-CHAVE:** Estados psíquicos, Adultos, Avaliação psicológica, Profissionais de saúde, Idosos

The World Health Organization (WHO, 2020) declared that the disease caused by the new coronavirus SARS-CoV-2, called COVID-19 (coronavirus disease-2019), had assumed pandemic status in March 2020. Until October 2 of that year, 33,842,281 people had been infected worldwide and 1,010,634 deaths had been confirmed. The new disease demanded global mobilizations in devising coping strategies. In the last 100 years, humanity has experienced three major scenarios of confronting contagious diseases: the Spanish Flu pandemic; Severe Acute Respiratory Syndrome (SARS); and H1N1 influenza. The Spanish Flu pandemic in 1918 wiped out approximately 40 million people, with rapid spread and high lethality globally.

During the H1N1 influenza pandemic in 2009, which caused 18,000 deaths, the lack of safety equipment caused the development of symptoms of psychological illness such as feelings of fear and isolation in health care workers, as well as symptoms of mental and physical exhaustion from overwork (Imai et al., 2010). In the previous pandemic, SARS in 2003, which caused the death of 800 people worldwide, the researchers observed the persistence of post-traumatic stress symptoms three years after the onset of the event,

demonstrating the harmful effects of the pandemic on the mental health of health care workers over time (P. Wu et al., 2009). The main recommendations to avoid contagion in previous pandemics remain in COVID-19 as social distancing and restriction of physical contact (WHO, 2020). However, such health practices, concomitant with the experience of the pandemic scenario, can generate symptoms and potentiate mental health damage in different populations (Becerra-García, Giménez Ballesta, Sánchez-Gutiérrez, Barbeito Resa, & Calvo Calvo, 2020). It is worth noting that indicators of mental health impairment cannot be confused with homonymous disorders. The presence of anxiety symptoms (uncomfortable sensations such as distress, restlessness, excessive worry, fear or dread, chest tightness, palpitation, breathlessness, nausea, excessive sweating, dizziness), according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V; American Psychiatric Association, 2013), does not characterize the anxiety disorder, since it requires a broad assessment of the subject.

The systematic review by Scortegagna et al. (2021) shows indicators of mental health impairment in health professionals facing the pandemic of COVID-19. From the analysis of 28 scientific articles published on this theme, the authors identified symptoms of anxiety and depression, as well as relevant changes in sleep in professionals who work on the front line facing the disease.

The signs of psychological illness throughout the pandemics show that public policies to confront these scenarios must evolve. There is a need for investments in research that promote rapid and coordinated responses, and which can facilitate the access of the most vulnerable populations, such as elderly adults and health professionals, in a more effective way, to protective actions and interventions for these populations (Holmes et al., 2020). Thus, according to the authors, it would be possible to promote scenarios of care, protection and prevention to the most common signs of illness.

In this scenario, Information and Communication Technologies (ICT) become one of the alternatives to minimize feelings of loneliness and anguish, resulting from social and family distance, and can be useful in interventions with vulnerable populations, through the Internet. International research has been showing the acceptance of users and the benefits of psychological interventions performed online (Rost et al., 2017; McCashin et al., 2019). Also, they indicates positive experiences in the treatment of depression, although they highlight some methodological shortcomings that need improvement, such as technical difficulties, interference of the medication used by the participant, and difficulties caused by lack of practice (Rost et al., 2017). Positive outcomes (motivation, safety, fun, recognizing negative thoughts and feelings without judging oneself) have been found in the young population in interventions for mood disorders, anxiety, trauma, and physical difficulties (McCashin et al., 2019), but these are still embryonic findings and further research is needed.

In Brazil, the Federal Council of Psychology (CFP) is advancing in the direction of regulating online psychological care during the pandemic. CFP Resolution No. 004/2020 regulates the use of ICT for online services, and, specifically, CFP Resolution No. 009/2018, which deals with psychological assessment, allows assessment processes through ICT with the use of standardized and normatized psychological tests for online use. However, although it is an important progress, there are still few tests authorized for use in digital format in Brazil. Of the 157 tests authorized by the Psychological Test Evaluation System (SATEPSI), only four (2.54%) are suitable for application in digital format.

Assessing, monitoring and intervening in the promotion of mental health of populations and identifying the means of intervention used, can help to guide efforts and serve vulnerable populations with more quality and speed, considering the increase in symptoms of mental illness and the need to promote and strengthen public policies. Therefore, this study aimed to identify effects of the COVID-19 pandemic on the mental health of adult populations and to verify the assessment resources employed.

## METHOD

This systematic review was conducted based on the recommendations proposed by PRISMA - Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Liberati et al., 2009), between May and June 2020. The key questions that guided this study were Q1: What were the adult populations researched? Q2: What were the mental health assessment resources employed? Q3: What were the mental health harms of adults during the COVID-19 pandemic?

### Search Strategies

Considering that the pandemic officially started on March 11, 2020 (WHO, 2020), all articles located were published in that year. The studies search included Pubmed, PsycINFO, PePSIC and Scielo databases, with no language filters applied. The choice of these databases was due to their pertinence and comprehensiveness with regard to the proposed research

theme. The keywords used were consulted in the Descriptors in Health Sciences (DeCS), becoming eligible: "mental health and Covid-19", "mental health and Covid19", and "mental health and Covid 19". The selection of these keywords sought to cover the largest number of articles possible, covering the various indicators of mental health.

### Eligibility Criteria

Published articles that evaluated the mental health of adults from different populations in the face of the COVID-19 pandemic were chosen. Duplicate titles, commentaries, editorials, letters to the editor and review articles from the scientific literature, articles that addressed the mental health of children and adolescents or in educational settings, papers that did not provide enough information in their respective abstracts, hindering the analysis of adequacy to the criteria adopted in this review, were excluded.

### Study selection process

Preliminarily, the authors of this study searched the databases according to the selected keywords. Next, the authors evaluated the titles and abstracts of the papers identified by the search strategy in relation to their content, applying the exclusion criteria. The materials that contained relevant information for this study proceeded to the next step. Finally, the authors fully evaluated the articles that met the selection criteria.

## RESULTS

The database searches yielded 1,158 publications. Figure 1 shows the flow chart of the selection process used in this study.

With the studies selected, in order to answer the questions, their contents were gathered as follows:

### What were the adult populations researched?

The analysis of the 54 articles allowed the initial classification of three groups, according to the populations studied, namely: general adult population, health professionals, and elderly adults. Table 1 describes the number of articles on each of these populations, the participants, authors, and countries of origin.

Table 1 shows that China, where the pandemic of COVID-19 officially began (WHO, 2020), was the country that produced more studies on the mental health conditions of the adult population (n=27). Following, with more productions, India (n=5) and Spain (n=4) are presented; and it is verified the inexistence of Brazilian studies during the researched period. The sample size varied extensively, from one (Anmella et al., 2020; Iaboni et al., 2020) to 14,866 individuals (Song et al., 2020).
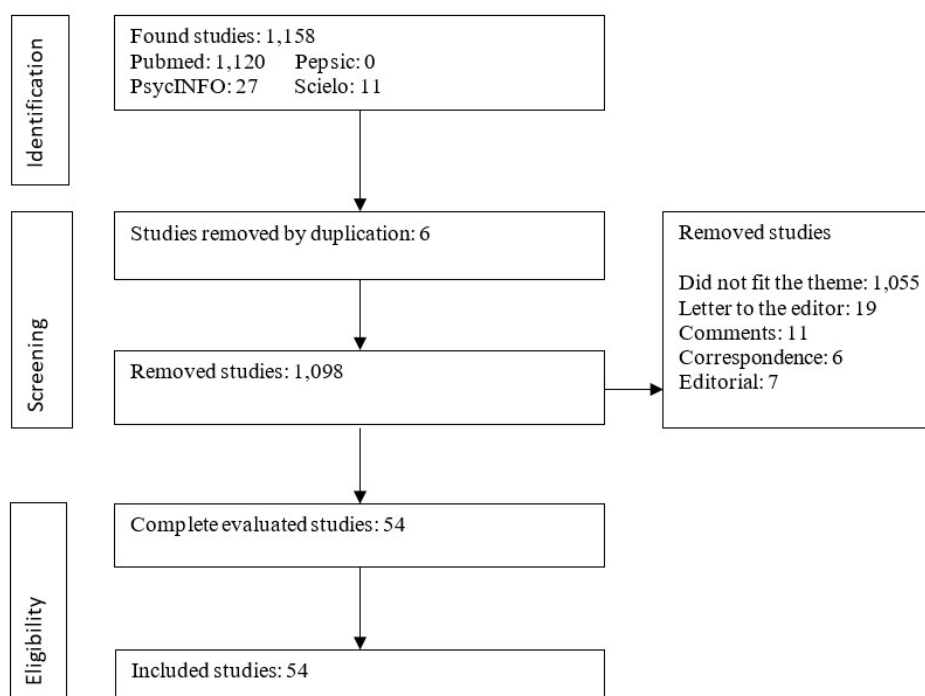


*Figure 1.* Flow diagram of the systematic review selection process, adapted from the PRISMA diagram (Liberati et al., 2009)

Table 1
*Description of the selected articles according to their populations*

| Population | Participants | Authors | Country of origin |
|---|---|---|---|
| General Adult Population (n=19) | 151 to 7,236 people (ages from 18 to 90 years old) | (Becerra-García et al., 2020) | China (n=8) |
| | | (Choi, Hui, & Wan, 2020) | India (n=3) |
| | | (Gao et al., 2020) | Spain (n=3) |
| | | (Huang & Zhao, 2020) | UK (n=1) |
| | | (Lei et al., 2020) | Turkey (n=1) |
| | | (Lin et al., 2020) | Jordan (n=1) |
| | | (Mazza et al., 2020) | Australia (n=1) |
| | | (Naser et al., 2020) | Italy (n=1) |
| | | (Özdin & Bayrak Özdin, 2020) | |
| | | (Parrado-González & León-Jariego, 2020) | |
| | | (Rehman et al., 2020) | |
| | | (González-Sanguino et al., 2020) | |
| | | (Smith et al., 2020) | |
| | | (Stanton et al., 2020) | |
| | | (Verma & Mishra, 2020) | |
| | | (H. Wang et al., 2020) | |
| | | (C. Wang et al., 2020) | |
| | | (Zheng et al., 2020) | |
| | | (Roy et al., 2020) | |
| Healthcare Professionals (n=28) | 1 to 14,866 people (ages from 18 to 60 years old) | (Anmella et al., 2020) | China (n=19) |
| | | (C. Zhang et al., 2020) | India (n=2) |
| | | (Liu et al., 2020) | Germany (n=1) |
| | | (Cai et al., 2020) | Italy (n=1) |
| | | (Civantos et al., 2020) | Jordan (n=1) |
| | | (D. Sun et al., 2020) | Spain (n=1) |
| | | (Dong et al., 2020) | Pakistan (n=1) |
| | | (Fawaz & Samaha, 2020) | Lebanon (n=1) |
| | | (Kang et al., 2020) | United States (n=1) |
| | | (Khanna et al., 2020) | |
| | | (Lai et al., 2020) | |
| | | (Lu et al., 2020) | |
| | | (Mo et al., 2020) | |
| | | (N. Sun et al., 2020) | |
| | | (Naser et al., 2020) | |
| | | (Podder et al., 2020) | |
| | | (Que et al., 2020) | |
| | | (Rossi et al., 2020) | |
| | | (Sethi et al., 2020) | |
| | | (Song et al., 2020) | |
| | | (Tu et al., 2020) | |
| | | (W. Zhang et al., 2020) | |
| | | (S. Wang et al., 2020) | |
| | | (W. Wu et al., 2020) | |
| | | (Xing et al., 2020) | |
| | | (Yin et al., 2020) | |
| | | (Zerbini et al., 2020) | |
| | | (Zhuo et al., 2020) | |

Table 1
*Cont.*

| Population | Participants | Authors | Country of origin |
|---|---|---|---|
| Older Adults (n=7) | 1 to 1,501 people (ages from 60 to 88 years old) | (Goethals et al., 2020) | Spain (n=1) |
| | | (Goodman-Casanova et al., 2020) | United States (n=1) |
| | | (Iaboni et al., 2020) | France (n=1) |
| | | (Kivi et al., 2020) | Canada (n=1) |
| | | (Losada-Baltar et al., 2020) | Sweden (n=1) |
| | | (Naarding et al., 2020) | Spain (n=1) |
| | | (Van Orden et al., 2020) | Netherlands (n=1) |

The research results could be systematized into three groups. The first group aimed to study the general adult population (n=19), without segmenting the ages of the participants. They comprised people between 18 and 90 years old, from diversified countries and different contexts, without specific professional profiles. The inclusion, in this group, of subjects older than 60 years (Mazza et al. 2020; González-Sanguino et al. 2020; C. Wang et al. 2020) was due precisely to the studies not differentiating the participants, or the outcomes, according to ages.

In the sequel, it is observed that most of the studies on adults were developed with health professionals (n=28) aged between 18 and 60 years and from different countries. These studies were divided methodologically into: Physicians and nurses (n=10) (Fawaz & Samaha, 2020; Kang et al., 2020; Lai et al., 2020; Que et al., 2020; Song et al., 2020; S. Wang et al., 2020; Xing et al., 2020; Zerbini et al., 2020; W. Zhang et al, 2020; Zhuo et al., 2020); Physicians, nurses, and administrative teams (n=6) (Dong et al., 2020; Liu et al., 2020; Lu et al., 2020; Rossi et al., 2020; D. Sun et al., 2020; Yin et al., 2020); Physicians only (n=4) (Anmella et al, 2020; Civantos et al., 2020; Khanna et al., 2020; Podder et al., 2020); Nurses only (n=3) (Mo et al., 2020; N. Sun et al., 2020; Tu et al., 2020); Physicians, nurses, technicians, pharmacists, residents and other unspecified professionals, logistics and social media staff (n=2) (Cai et al, 2020; Naser et al., 2020); Did not specify health professionals assessed (n=2) (W. Wu et al., 2020; W. Zhang et al., 2020); Physicians and dentists (n=1) (Sethi et al., 2020).

Finally, the third group included research conducted with elderly adult populations (n=7). The studies that had exclusive populations of elderly adults and/or that differentiated the results of individuals older than 60 years from other populations analyzing these results independently were considered eligible for this group. The age of the samples analyzed ranged from 60 to 88 years, considering only elderly adults, although in two studies (Goethals, et al., 2020; Losada-Baltar, et al. 2020) participants younger than 60 years were included. The results presented were taken from the elderly adult populations only.

Two types of studies have been identified: The first, with elderly people older than 60 years and with good psychiatric conditions, without evident changes (Goethals et al., 2020; Kivi et al., 2020; Losada-Baltar et al., 2020; Van Orden et al., 2020); and the second type of studies, which included elderly people who had some psychiatric condition (Goodman-Casanova et al., 2020; Iaboni et al., 2020; Naarding et al., 2020), in particular Alzheimer's disease and other dementias, ranging from mild to severe degrees.

## What were the mental health assessment resources employed?

Table 2 describes the assessment instruments used and the mental health harms found in the selected articles. The authors of this study sought to quantify and gather similar data in order to compare the different groups.

There was wide variation of instruments used in each group and between groups. The most used instruments were the Generalized Anxiety Disorder 7-Item Scale (n=11) and the Patient Health Questionnaire-9 (n=10). Inventories, questionnaires or semi-structured interviews developed by the authors themselves were also widely used (n=15), however, since they are different procedures, we chose to only count them. Given the recommendation of social isolation, the field of interaction between researchers and participants became digital in 50 studies (92%), in which the use of the Internet and electronic devices enabled data collection.

## What were the mental health harms of adults during the COVID-19 pandemic?

Regarding the mental health harms to adults resulting from the pandemic of COVID-19, in the three groups, 95 reports of changes were found, 21 symptoms were mentioned, with anxiety (n=28, 29.47%) and depression (n=23, 24.21%) symptoms being the most frequent. Healthcare professionals had the greatest range of reports, identified 57 times (60%) in the studies and mentioned 12 symptoms (57.14%), with anxiety symptoms (n=13, 22.80%) and depressive symptoms (n=11, 19.29%) being the most frequently reported. Many health professionals presented more than one symptom concomitantly.

Table 2

*Description of mental health problems in the general adult population, healthcare professionals, and older adults and the assessment instruments employed*

| Population | Instruments/Tests Used | Self-reported symptoms or behaviors |
|---|---|---|
| General Adult Population (n=19) | Semi-structured Questionnaire (*on-line*; n=5); | Anxiety (n=14); |
| | Depression, Anxiety and Stress Scale (*on-line*; n=3); | Depressive symptoms (n=11); |
| | Generalized Anxiety Disorder 7-Item Scale (*on-line*; n=3); | Stress (n=5); |
| | Impact of Event Scale-Revised (*on-line*; n=2); | Compulsive shopping (n=1). |
| | Patient Health Questionnaire-9 (*on-line*; n=2); | |
| | Beck Anxiety Inventory (*on-line*; n=1); | |
| | Beck Depression Inventory (*on-line*; n=1); | |
| | Warwick-Edinburg Mental Well-being Scale (*on-line*; n=1); | |
| | Hospital Anxiety and Depression Scale (*on-line*; n=1); | |
| | Health Anxiety Inventory (*on-line*; n=1); | |
| | National Internet Survey on Emotional and Mental Health (*on-line*; n=1); | |
| | Social Anxiety Scale (*on-line*; n=1); | |
| | Zung's Self-rating Depression Scale (*on-line*; n=1); | |
| | Goldberg Health Questionnaire-12 (*on-line*; n=1); | |
| | WHO (Five) Well-being Index (*on-line*; n=1); | |
| | State-Trait Anxiety Inventory (*on-line*; n=1); | |
| | Other versions of the Patient Health Questionnaire (*on-line*; n=1); | |
| | Other versions of the Generalized Anxiety Disorder (*on-line*; n=1); | |
| | PTSD Checklist - Civilian Version (*on-line*; n=1); | |
| | Functional Assessment of Chronic Illness Therapy - Spiritual Well-Being 12 items (*on-line*; n=1); | |
| | Self-Compassion Scale (*on-line*; n=1). | |
| Healthcare Professionals (n=28) | Generalized Anxiety Disorder 7-Item Scale (*on-line*; n=8); | Anxiety (n=13); |
| | Patient Health Questionnaire-9 (*on-line*; n=8); | Depressive symptoms (n=11); |
| | Insomnia Severity Index (*on-line*; n=7); | Sleep problems (n=8); |
| | Inventory or semi-structured questionnaire developed by the researchers (*on-line*; n=7); | Stress (n=5); |
| | Impact of Event Scale (*on-line*; n=5); | Fear (n=4); |
| | Pittsburgh Sleep Quality Index (*on-line*; n=3); | Exhaustion (n=4); |
| | Symptom Checklist-90 (*on-line*; n=3); | Posttraumatic Stress (n=3); |
| | Other versions of the Patient Health Questionnaire (*on-line*; n=3). | Somatization (n=2); |
| | Case Study (presential, n=1) | Obsessive-Compulsive Behavior (n=2); |
| | | Psychoticism (n=2); |
| | | Distress (n=2); |
| | | Burnout (n=1). |
| Older Adults (n=7) | Philadelphia Moral Scale (online; n=1); | Loneliness (n=3); |
| | Semi-structured interview (online; n=3); | Anxiety (n=1); |
| | Cognitive Behavioral Therapy (online; n=1); | Sadness (n=1); |
| | Case study (presential; n=2). | Sedentarism (n=1); |
| | | Isolation Resistance (n=1). |

The general adult population showed 31 alterations (32.63%), grouped into four different symptoms (19.04%), with anxiety symptoms being the most reported (n=14, 45.16%), followed by depressive symptoms (n=11, 35.48%). In the elderly adult population, 7 changes were identified (7.36%), with five different symptoms reported (23.80%). Loneliness symptoms were the most mentioned (n=3, 42.85%) while other symptoms were presented only once each (14.28%).

## DISCUSSION

The scientific production on the psychological effects of the COVID-19 pandemic on the mental health of adult populations portrays the investigation of three main groups (general adult population, health professionals, elderly adults), assessed by several instruments in which the use of digital resources predominated. As a result, psychic impairments were observed with anxiety symptoms and depression standing out.

Initiating with the general adult population, studies show that anxiety and depression symptoms affect more young adult populations (18-45 years old; Huang & Zhao, 2020; Naser et al., 2020; Smith et al., 2020; Stanton et al., 2020), especially female (González-Sanguino et al., 2020; Lin et al., 2020; Mazza et al., 2020; Naser et al., 2020; Özdin & Bayrak Özdin, 2020; Parrado-González & León-Jariego, 2020; Rehman et al., 2020; Smith et al., 2020). These results support previous studies showing that women are more likely to develop post-traumatic stress symptoms and anxiety in high impact events (Sareen et al., 2013).

The reason why young adult populations expressed a higher degree of anxiety has not been widely investigated and therefore warrants further investigation. However, the enormous amount of information about the new coronavirus circulated on social media, one of the most popular means of communication in this population, which may have contributed to the increased anxiety among younger people. In addition, with the outbreak of COVID-19 there were school closures located throughout the country; a sharp drop in business activity and threat to job security; some women had to reconcile domestic chores with other activities, including caring for family members, as observed in other studies (González-Sanguino et al., 2020; Lin et al., 2020). These demographic disparities identified in anxiety levels may provide clues for targeting public health interventions to reduce mental health-related problems.

In the sequence, the results found revealed a worrisome picture. Healthcare workers manifested severe psychological distress in which symptoms of anxiety (n=13), depression (n=11) and sleep problems (n=8) were the most commonly described. Because they are in daily contact with infected people, they constitute a particularly different risk group from others (Liu et al., 2020; Zhang et al., 2020). The high risk of infection to which they are exposed, the increased workload (Civantos et al., 2020; Sethi et al., 2020; D. Sun et al., 2020), and the need for routine care of equipment and procedures (Xing et al., 2020) seem to increase and exponentiate feelings of fear, anxiety, hopelessness, and stress. This result is similar to the ones found for other pandemics (Imai et al., 2010).

Complying with health protection measures, health professionals stay away from their families and friends to avoid contaminating them. The decrease in contact with important people seemed to weaken the mental health of this group, which may have contributed to the increase of depressive symptoms, as reported in some studies (Dong et al., 2020; Lai et al., 2020).

These results reinforce previous findings observed in other pandemics in which high workloads, lack of professionals, in addition to the experience of ethical issues, and dealing with death situations, contributed to the increase of extreme stress (Henderson et al., 2000; P. Wu et al., 2009). In particular, the study by P. Wu et al. (2009) highlights the extent of psychological damage in health professionals, even after three years of the pandemic, with emphasis on the presence of post-traumatic stress symptoms.

These data motivate some questions: are health professionals being welcomed and attended in their psychic demands, regarding anxiety and depression symptoms? Are mental health care services available to these professionals? The answers confirm that, as in other pandemic scenarios, health professionals were severely affected in their mental health and, when the offer of interventions is observed, it is verified that there are still insufficient preventive and protective practices for this population to face pandemics (Scortegagna et al., 2021). Thus, policies to promote and strengthen the mental health of these professionals are insufficient and need to be increased.

Finally, although they are among the highest mortality groups (WHO, 2020), studies with elderly adults have been scarcer and have indicated distinct signs of emotional distress, especially when compared to younger populations. Identifying who the elderly adults surveyed were may help to understand these data and provide needed assistance.

The study by Losada-Baltar et al. (2020) showed that elderly people with good psychiatric conditions have low reports of anxiety symptoms and a lower traumatic impact of the pandemic on their routines. However, it is observed in reports of elderly people, voluntary participants in mental health care activities in at least three states of Brazil (Scortegagna et al., 2021) that the restrictions of social and family life, imposed by the physical distance, contributed to increase feelings of loneliness and social exclusion. These

data have also been confirmed in other studies (Losada-Baltar et al., 2020; Van Orden et al., 2020).

Feelings of loneliness seem to increase other forms of distress. Living alone increased symptoms of anxiety, difficulty sleeping, and decreased feelings of well-being (Goodman-Casanova et al., 2020). Family support networks and changes that seek greater interaction may be protective factors in decreasing feelings of loneliness (Brooks et al., 2020). On this point, some authors share the idea that digital tools such as computers, smartphones, and communication services can decrease the negative effects of physical distance (Goodman-Casanova et al., 2020), but not all elderly people adapt easily to technologies (Goethals et al., 2020) and may need special attention in this process. Faced with these difficulties, it has been observed in Brazil, that some children have turned to meeting the care needs of their parents, assisting them in the handling of m-Health devices and in their insertion to collective mental health care in web platforms (Scortegagna et al., 2021). Such practice can contribute to solve problems and enhance health resources.

The physical distancing also contributed to the increase of sedentarism among elderly people. The study by Goethals et al. (2020) identified a higher risk of physical injuries caused by the lack of adequate equipment to practice exercises at home and lack of knowledge in physical activities. For the authors, what explains the increase in sedentarism was the breakdown of social bonds experienced during group physical activities, which may lead to a decline in the mental and emotional health of elderly adults.

It is possible to infer that the simple transposition from face-to-face to online activities may not be attractive and that the tools used need to be easy to understand and handle. Allied to this, the lack of digital literacy, the scarce economic resources for the acquisition and maintenance of technological means, the little time needed for familiarization with such activities and to develop feelings of confidence and security in this type of assistance, can negatively affect this alternative, as one of the resources for health promotion.

To the detriment of worrying about the pandemic, other concerns causing unwellness and related to social consequences, economic and financial situations were identified in residents in Sweden (Kivi et al., 2020). Related among the countries with high Human Development Index (HDI) and occupying the third position worldwide in the aging ranking (Alldatanow, 2020), a possible explanation to the expressive unwellness with secondary concerns according to Kivi et al. (2020) may be linked to the fact that some elderly adults deny their identification with the risk groups. Another possible explanation, still according to the authors, is the levels of well-being of the sample assessed and the greater freedom of movement in the country, when compared to the restrictions imposed elsewhere.

Elderly people with dementia or other impairments are at greater risk of contracting COVID-19. Difficulties in following safety and physical distancing recommendations (Iaboni et al., 2020) and greater difficulty in identifying disease symptoms (Naarding et al., 2020) may favor transmissions in shared spaces such as geriatric homes or institutions serving these populations and consequently increase the number of deaths.

In order to help minimize this adverse context, support groups can be a source of help in the activities of daily living for elderly people with mild dementia, but they must receive specific support and training. People who help with basic supplies and provide information about the pandemic can be generators of well-being in elderly people with this condition and live alone. On the other hand, the paralysis of physical and social activities can lead to worsening cognition and the development of daily activities, as reported in studies (Goodman-Casanova et al., 2020) and collective mental health care practices (Scortegagna et al., 2021).

While maintaining some heterogeneity, the different groups of adult populations experience some type of mental distress while experiencing the pandemic of COVID-19. Notably, symptoms of anxiety and depression stand out, although differences between the groups cause them to be experienced in different ways.

Health professionals present greater emotional damage and are more exposed to the virus and its consequences due to the extensive hospital routine of contact with patients, especially those who work directly in facing the virus (Lai et al., 2020; Liu et al., 2020). The general population, however, seems to manifest more symptoms of anxiety and depression as a consequence of routine changes and pandemic health threats (Huang & Zhao, 2020; Naser et al., 2020; Smith et al., 2020; Stanton et al., 2020). In the elderly adult population, the impacts of physical detachment are related to feelings of loneliness rather than changes in routine (Goodman-Casanova et al., 2020).

The assessment of mental health indicators in different populations was possible mainly using digital resources. The use of the internet and electronic devices in 92% (n=50) of the studies points to an important adaptation in the assessment scenarios, suggesting that instruments consolidated in face-to-face applications can be studied as to their equivalences to be used remotely, synchronously.

This methodological change is an important advance in research on the assessment of mental health conditions. However, in Brazil, as pointed out by the CFP Resolution No. 009/2018, for an assessment instrument to be used by a psychologist, among other requirements, it must present technical and scientific consistency. This means that it is not possible to transpose a face-to-face application test to a digital format, at the risk of the instrument losing its psychometric properties with the addition of other variables such as brightness, colors, and sensitivity of the screens and the expertise and familiarity of the assessed subject with the use of digital resources. Therefore, the development of research

to verify the scope and limitations of psychological tests and psychological assessment practices online and synchronously should be encouraged by health and governmental policies.

From this perspective, the findings of this study underscore the importance of providing digital assessment resources in the prevention, intervention, and monitoring of mental health and general health. Diverse digital alternatives need to gain ground and reach populations that are more vulnerable safely and effectively. Coupled with other care resources, the development of innovative digital e-Health resources can be enacted in the direction of promoting quality of life and addressing collective health in the face of pandemic aggravations, limits to face-to-face care, or minimal access to health services (Rost et al., 2017; McCashin et al., 2019).

Although the main findings of this study can contribute to guide public policies in the face of the effects of the pandemic, the follow-up of research, evaluation and intervention practices to the population, must be seen within its limitations. The time range of access to the articles is the main one, and new searches, contemplating extended periods may reflect and/or expand the results found here.

The lack of studies on the Brazilian population may have been precisely due to the time range contemplated by this research, although one cannot fail to mention the need to encourage increased research in Brazil aimed at the development and completion of projects that can benefit science and society. Public policies to disseminate more inclusive protection and intervention actions, which reduce the negative impact of the pandemic on populations and facilitate adherence to protective initiatives should be considered as a matter of urgency (Holmes et al., 2020).

Therefore, the follow-up of studies is a preeminent reality. To this end, it is suggested that research seek to longitudinally follow the mental health of the population in different evolutionary phases, that the evaluation and monitoring studies of the population's mental illness be carried out with the use of multi-methods, that there be an increase in studies for the development of tests with evidence of validity to be used in online evaluations. Besides, it is suggested that research investigate the efficacy of online therapies for mental health, in different perspectives and modalities.

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* The references analyzed in this article are marked with the symbol (*).