TEXTO & CONTEXTO ENFERMAGEM
TEXT & CONTEXT NURSING TEXTO & CONTEXTO ENFERMERÍA

COVID-19 AND STRATEGIES TO REDUCE ANXIETY IN NURSING: SCOPING REVIEW AND META-ANALYSIS

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ABSTRACT

Objective: to map the production of knowledge on the strategies used for the management of anxiety, in Nursing professionals, during the fight against COVID-19, Severe Acute Respiratory Syndrome (SARS) and Midlle East Respiratory Syndrome (MERS).
Method: a scoping review, followed by meta-analysis, conducted in the BVS, EMBASE, PUBMED, CINAHL, PsycINFo, SCOPUS and Web of Science information sources. The review protocol is registered in International Prospective Register of Systematic Reviews under number under number CRD42020192918. Searches in electronic databases were carried out from 22 to 27 July 2020The data were analyzed and synthesized in a narrative fashion.
Results: a total of 31 studies were included in the review; of these, 12 were included in the meta-analysis. The Nursing professionals presented higher anxiety indexes than the other health professionals. The following stood out in the interventions for the management of anxiety: emotional support, social support, educational campaign, implementation of safety policies, and adoption of a positive coping style.
Conclusion: the evidence suggests that a considerable proportion of Nursing professionals experienced high anxiety levels, which interfered with COVID-19 prevention and control. Therefore, it becomes necessary to establish intervention protocols to reduce anxiety, with clear and objective language, favoring emotional support, positive coping techniques, and a welcoming work environment, in addition to implementing policies that ensure protective measures against COVID-19.

DESCRIPTORS: Anxiety. Coronavirus infections. Nursing. Mental health. Severe acute respiratory syndrome. Health staff.

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RESUMO

Objetivo: mapear a produção do conhecimento sobre as estratégias utilizadas para o manejo da ansiedade, em profissionais de enfermagem, durante o enfrentamento da COVID-19, da Síndrome Respiratória Aguda Grave (SARS)e da Síndrome Respiratória do Oriente Médio (MERS).
Método: revisão de escopo, seguida de meta-análise, realizada nas fontes de informações BVS, EMBASE, PUBMED, CINAHL, PsycINFo, SCOPUS e *Web of Science*. O protocolo de revisão está registrado no *International Prospective Register of Systematic Reviews* sob número CRD42020192918. Os dados foram analisados e sintetizados de forma narrativa.
Resultados: 31 estudos foram incluídos na revisão, destes, 12 incluídos na meta-análise. Os profissionais de enfermagem apresentaram índices de ansiedade maiores do que os demais profissionais de saúde. Nas intervenções para o manejo da ansiedade, destacam-se suporte emocional, apoio social, campanha educacional, implementação de políticas de segurança e adoção de um estilo de enfrentamento positivo.
Conclusão: as evidências sugerem que considerável proporção de profissionais de enfermagem vivenciou alto nível de ansiedade, interferindo na prevenção e no controle da COVID-19. Portanto, torna-se necessário o estabelecimento de protocolos de intervenções para redução da ansiedade, com linguagem clara e objetiva, propiciando suporte emocional, técnicas de enfrentamento positivo, ambiente de trabalho acolhedor, além de implementação de políticas que assegurem medidas protetivas contra a COVID-19.

DESCRITORES: Ansiedade. Infecções por coronavírus. Enfermagem. Saúde mental. Síndrome respiratória aguda grave. Pessoal de saúde.

COVID-19 Y LAS ESTRATEGIAS PARA REDUCIR EL NIVEL DE ANSIEDAD EN PROFESIONALES DE ENFERMERÍA: REVISIÓN DE ALCANCE Y META-ANÁLISIS

RESUMEN

Objetivo: mapear la producción de conocimiento sobre las estrategias utilizadas para el manejo de la ansiedad en profesionales de Enfermería durante la lucha contra COVID-19, Sindrome Respiratorio Agudo Grave (SARS) y Sindrome Respiratorio de Oriente Medio (MERS).
Método: revisión de alcance seguida de meta-análisis, realizada en las siguientes fuentes de información: BVS, EMBASE, PUBMED, CINAHL, PsycINFo, SCOPUS y Web of Science. El protocolo de revisión está registrado en *International Prospective Register of Systematic Reviews* con número CRD42020192918. Los datos se analizaron y sintetizaron en forma narrativa.
Resultados: se incluyó un total de 31 estudios en esta revisión; de ellos, 12 fueron incluidos en el meta-análisis. Los profesionales de Enfermería presentaron índices de ansiedad más elevados que los demás profesionales de salud. En las intervenciones para el manejo de la ansiedad, se destacan las siguientes: soporte emocional, apoyo social, campaña educativa, implementación de políticas de seguridad y adopción de un estilo de enfrentamiento positivo.
Conclusión: las evidencias sugieren que una considerable proporción de profesionales de Enfermería experimentó un nivel de ansiedad elevado, lo que interfirió en la prevención y el control de la epidemia de COVID-19. Por lo tanto, resulta necesario establecer protocolos de intervenciones para reducir la ansiedad, con un lenguaje claro y objetivo, propiciando soporte emocional, técnicas de enfrentamiento positivo y un ambiente de trabajo cálido, además de la implementación de políticas que garanticen medidas de protección contra el COVID-19.

DESCRIPTORES: Ansiedad. Infecciones por coronavirus. Enfermería. Salud mental. Síndrome respiratorio agudo grave. Personal de salud.

INTRODUCTION

Severe Acute Respiratory Syndromes (SARS) are infectious diseases that quickly turn into epidemics. According to the data, there is a major and immediate impact of the virus on the global health system, disease prevention, education and the economy in a short period[1]. The new coronavirus (SARS-CoV-2), which was responsible for the COVID-19 outbreak, is causing all these changes and has been generating anxiety in the general population, even in the health professionals. Health professionals are the gear of the health system; therefore, illness in this population has an impact on COVID-19 prevention and control. In view of this, a synthesis of the strategies to reduce anxiety at this critical global moment becomes necessary.

Among the health professions, Nursing stands out, as it is considered the backbone of the health system[2,3], with professionals who are on the front line of care, staying full time with the patients[4]. The workforce represented by these workers stands out in this context and it is important to highlight the possibility of meeting their basic human needs, in order to guarantee their motivation[5]. However, the anxiety experienced by the professionals makes it difficult to meet such needs.

It is worth noting that Nursing is one of the professions presenting high anxiety levels, which is often related to the following: overwork; high risk of contamination and inadequate protection against coronavirus; concern about the possibility of these professionals transmitting the virus to family members[6]; and care provided to patients with negative emotions and high anxiety levels[7].

One of the care actions provided by nurses is education in health, conducted by establishing the interpersonal relationship between nurse and patient, which is permeated by the exchange of anxiety between the components of the relationship[8]. Therefore, it is important that the nurse's anxiety level is low, so that it is possible to convey clear, objective and scientific information about the COVID-19 prevention and control measures, in order to increase acceptability and adherence to these measures.

A number of studies report strategies to reduce nurses' anxiety, among which the following can be mentioned: reading articles related to COVID-19, implementing a coronavirus prevention program, objective analysis of the real situations, and adoption of strategies to cope with usual reaction patterns to anxiety that generate more anxiety[7–9].

According to studies, anxiety in the general population, which interferes with COVID-19 prevention and control, can be reduced by providing more information on preventive measures against the coronavirus, grounded on scientific basis, and communicated by health professionals and by the Ministry of Health, conveying trust to the population[10]. Trust is one of the main elements to increase the population's adherence to these measures and can be established through interpersonal relationships (between nurse and patient, nurse and family members, and nurse and the community[8]), as nurses work at all health care levels (primary, secondary and tertiary), thus becoming one of the main actors in prevention and control, so necessary for coping with this disease. In Hong Kong, one of the strategies to reduce anxiety in older adults was the use of telephone calls, made by nurses, with measures for SARS prevention and control[11].

Strategies to reduce anxiety in nurses, such as objectively analyzing real situations, raising awareness about anxiety, and accessing scientific knowledge about COVID-19, are important to cope with this pandemic, since high anxiety levels are related to increased stress at work, loss of emotional control and increased job abandonment[1], affecting adherence to the COVID-19 prevention and control measures in the population, as nurses are responsible for a large part of education in health.

Therefore, this study is important, since it assumes that, through the synthesis of evidence on anxiety management strategies for Nursing professionals, it will be possible to translate scientific knowledge into health practice, enabling greater acceptance and adherence to measures to prevent and control COVID-19 and other acute respiratory syndromes.

The objective of this review is to map the strategies used for the management of anxiety in Nursing professionals, during the fight against COVID-19, SARS and MERS, for the promotion of mental health and, consequently, to contribute to more effective assistance in coping with this pandemic.

METHOD

This systematic review followed the guidelines of the Joanna Briggs Institute (JBI)[12] for scoping reviews)[12–13], which aim at mapping the main concepts that support a given knowledge area; at examining the extent, scope and nature of the research; at summarizing and disseminating the research data; and at identifying existing research gaps; of the PRISMA extension (PRISMA-ScR), specific for scoping reviews, which is ideal for describing in detail the research decision process in view of the method used[14]; and of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)[15], to perform the meta-analysis. The protocol of this review was registered in the International Prospective Register of Systematic Reviews (PROSPERO) under number CRD42020192918.

The guiding question of the review was the following: "which are the strategies used for the management of anxiety in Nursing professionals for the promotion of mental health during the COVID-19, SARS and MERS pandemics?" The studies included in this scoping review were listed based on the PCC (Population, Concept and Context) mnemonic strategy, according to what is recommended in the JBI protocol. For this review, the Nursing professionals (nurses, nursing assistants and nursing technicians) were defined as population, and the concept of interest was the strategies for the management of anxiety in Nursing professionals, while the context analyzed was the COVID-19 pandemic, in addition to the SARS and MERS epidemics.

The search strategy was conducted in three stages. The first stage of the research was carried out in PUBMED and BSV, to analyze the words contained in the titles and abstracts, using the following keywords: "Anxiety", "SARS Virus", "COVID-19", "Coronavirus Infections", "prevention and control". In the second stage, the studies were identified by means of the search strategy adapted to each electronic database: BVS, EMBASE, PUBMED, CINAHL, PsycINFo (via APA), SCOPUS and Web of Science. Two search strategies were developed, with the objective of obtaining the greatest possible number of articles on the theme, with the following search terms in PubMed (we adapted the strategy for the other databases): 1) ("Anxiety" [Mesh] OR anxiety OR anxious OR anxieties) AND ("coronavirus disease-19" OR covid-19 OR "COVID-19" OR "corona virus disease 2019" OR "SARS-CoV-2" OR "2019-new coronavirus" OR "2019 novel coronavirus" OR "2019-nCoV" OR coronavirus OR "SARS Virus"); 2) ("Anxiety" [Mesh] OR anxiety OR anxious OR anxieties) AND ("coronavirus disease-19" OR covid-19 OR "COVID-19" OR "corona virus disease 2019" OR "SARS-CoV-2" OR "2019-new coronavirus" OR "2019 novel coronavirus" OR "2019-nCoV" OR coronavirus OR "SARS Virus") AND (nursing OR nurses). In the third stage, a search was conducted in the references of the selected articles to find the studies that were not retrieved by the search strategy.

After collecting all the references, duplicate articles were excluded by using the Mendeley software. The searches in the electronic databases were conducted from July 22nd to July 27th, 2020.

The inclusion criteria were as follows: quasi-experimental studies; randomized clinical trials; cohort, case-control and cross-sectional studies; and letters to the editor or opinion letters, in addition to qualitative studies addressing strategies to reduce anxiety due to COVID-19 and/or SARS in Nursing professionals. There was no language restriction (consequently, all the articles published in any language and addressing the theme were included) or regarding year of publication. Studies that did not meet the review objectives or did not provide information pertinent to the contribution of the review were excluded.

For the research and data extraction phase, the Covidence© software was used, which is a screening and data extraction tool developed to ease the review process. The selection of studies was performed in phases. In Phase 1, two researchers independently examined the titles and abstracts of the potentially relevant studies and the selected articles that seemed to meet the inclusion criteria, based on their abstracts. In Phase 2, the same reviewers read the full text of all the articles selected, independently, and excluded those studies that did not meet the inclusion criteria. Any disagreement, either in the first or in the second phase, was resolved by means of discussion and agreement between the two reviewers. In case consensus was not reached, a third reviewer was involved to make a final decision.

The assessment of the methodological quality was performed by the two independent evaluators, using "The System for the Unified Management, Assessment and Review of Information" (SUMARI) tool[12], which establishes criteria for the assessment of primary studies. Studies with low methodological quality were excluded from this review.

The authors extracted the following information from each article included in the synthesis: locus (country), year and author; methodology; main results; and quality level. Independently, both authors verified the data extracted and made changes as necessary, in addition to conducting a quality assessment of the studies using MAStARI, the JBI's meta-analysis and review statistical assessment instrument. According to the studies found, all three assessment instruments that make up MAStARI were used: 1) critical assessment checklist for analytical cross-sectional studies, 2) critical assessment checklist for cohort studies, 3) critical assessment checklist for qualitative research studies, and 4) checklist for text and opinion articles.

The general combination of data from the studies included was performed by means of a descriptive synthesis. Statistical grouping of the data was planned with the use of meta-analysis when the articles were considered combinable and relatively homogeneous in relation to the sample design, population and results. The scales were rescheduled between 0 and 1 to be comparable. The model used for conducting the meta-analysis was that of random effects with estimation of Restricted Maximum Likelihood (REML). In relation to the quantitative data, the following were extracted for conducting the meta-analysis: mean, standard deviation and sample size.

RESULTS

Selection of studies

In the eight sources of information surveyed, 445 studies were found: 232 were duplicates, leaving 213 studies for selection; of these, 158 were excluded for not meeting the eligibility criteria, such as: not addressing strategies for the management of anxiety in Nursing professionals and/or not presenting Nursing professionals as study participants. The review final sample consisted in 31 studies. A summary of the literature identified in each stage of the research process can be seen in Figure 1.

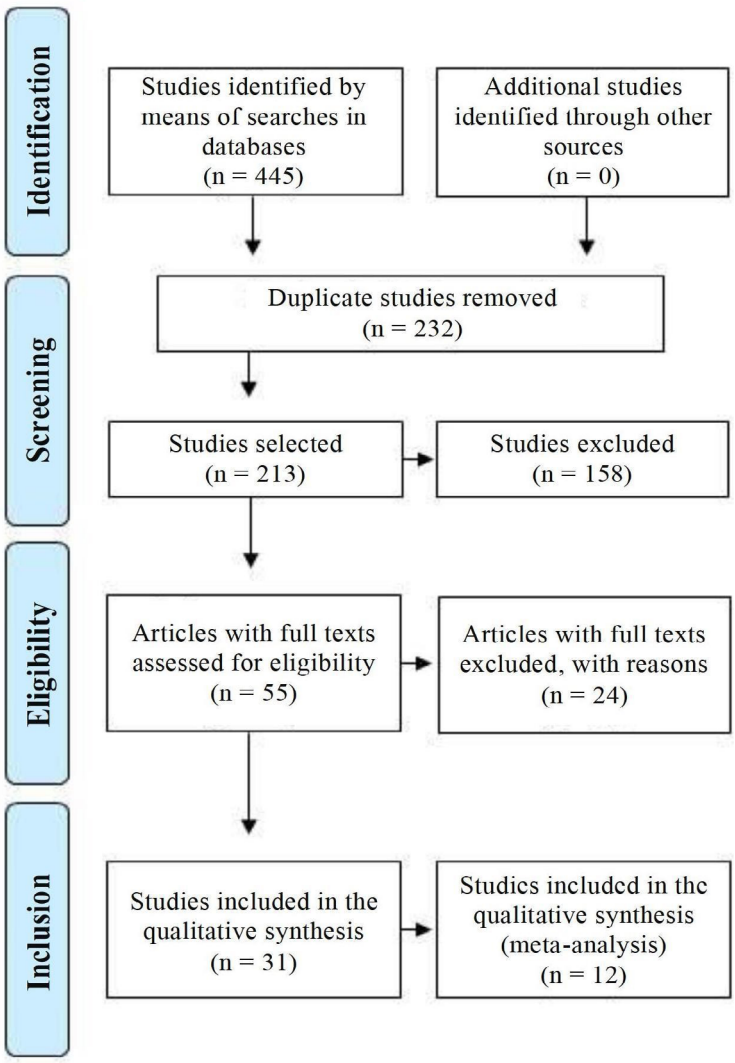

Figure 1 – Flowchart of the study selection process for the systematic review.

Characteristics of the studies

Of the 31 studies included, 27 were published in English, three in Chinese and one in German. The studies addressed strategies to manage anxiety in Nursing professionals during the 2003 SARS outbreak in Canada[16]; the 2015 MERS outbreak in South Korea[17–18] and Saudi Arabia[19–20]; and the COVID-19 pandemic in the United States[21–22], China[23–41], Germany[42], Singapore[43], the United Kingdom[44–45], and Canada[46]. Regarding the population, four studies were conducted with Nursing professionals exclusively, while 27 studies included health professionals, although all contemplated Nursing professionals as participants. Chart 1 summarizes the descriptive characteristics of the studies.

Chart 1 – Characteristics of the studies included in the review, according to title, author, year of publication, country, methodology and results. Brazil, 2010-2020. (n=31)

Author/ Year/Locus	Methodology	Results
Shingler-Nace A, 2020. United States[21]	Opinion article. It described some strategies for Nursing team leaders to reduce anxiety in their teams.	The leader (nurse) needs to: remain calm; establish continuous communication, based on current protocols and information; be collaborative by sending messages regarding the importance of teamwork; coordinate and give support to the team, so as to provide alignment and trust among the team members.
Almutairi AF et al., 2018. Saudi Arabia[20]	Qualitative study. It explored and described the phenomenon of SARS and MERS by nurses and physicians.	The educational campaign must focus on signs and symptoms, transmissibility, personal hygiene and precaution practices; The hospital must provide emotional support in the form of psychotherapy for infected patients and family members.
Fessell D, Cherniss C, 2020. United States[22]	Opinion article. It described the use of micro-practices to reduce anxiety, and to mitigate emotional wear out in the work environment.	*Mindfulness*; self-management through breathing, focusing on the mind and body; and proper connection to perceive their own physical and psychological needs; Naming emotions; writing three good things for which one is grateful; Gratitude in the team and Diaphragmatic breathing.
Xiang YT et al., 2020. China[23]	Opinion article. It described some methods to take care of the professionals' mental health during SARS in 2003.	Creation of multidisciplinary mental health teams to support health professionals; Clear communication and updates to improve the sensation of uncertainty and fear; Regular clinical screenings for depression, anxiety and suicide by mental health professionals.
Cai W et al., 2020. China[24]	Cross-sectional study. It investigated psychological changes in the professionals: social support, resilience and mental health.	Peer support: exchange between the experienced professionals (who acted against SARS and H1N1) and their inexperienced peers; Online mental health service; Early screening and interventions.
Bohlken J et al., 2020. Germany[42]	Review article. It analyzed the psychological stress of care, due to the pandemic.	Preventive interventions that assist the professionals in dealing with anxiety and stress; Social support plays an important role in the reduction of anxiety and psychological stress.
Huang JZ et al., 2020. China[26]	Cross-sectional study. It investigated the health professionals' mental health.	Training of psychological skills in the health team; Increase of social support; and Psychological counseling.
Wu J et al., 2020. China[27]	Cross-sectional study. It analyzed the factors that exerted an influence on the sleep quality of clinical nurses in the front line against COVID-19;	Improvement of the mechanism for the management of public health emergencies; Guaranteeing adequate human resources; Comprehensive infectious disease prevention system; Strengthening psychological guidance and humanistic care.
Shen X et al., 2020. China[28]	Opinion article. It described psychological problems, such as anxiety, among the nurses working in ICUs during the COVID-19 pandemic, as well as interventions conducted to promote mental health care.	Inclusion of a psychologist in the health team, in addition to a multi-professional support team; Expressing emotions through conversations, drawings, singing and exercise; Encouraging deep breathing and relaxation techniques during working hours; Sharing experiences and communication among the colleagues; Not making oneself forget about unpleasant experiences and Social Support System.

Chart 1 – Cont.

Author/ Year/Locus	Methodology	Results
Mo Y et al., 2020. China[29]	Cross-sectional study. It identified stress among the nurses and the factors that influence it during the fight against COVID-19.	Offering assistance: it relieves the team's psychological stress; Training and qualification for the fight against COVID-19 and Social support; Mutual care measures; support and encouragement among the nurses, with exchange of experiences; Creation of online platforms: with counseling on how to reduce transmission risk; Training on leisure to reduce anxiety.
Alsubaie S et al. 2019., Saudi Arabia[41]	Cross-sectional research. It identified knowledge, anxiety level, and change in the preventive practices during MERS-CoV.	Approaches to reduce the concerns referring to virus transmission to family members; Creation of educational campaigns with infection control protocols and guidelines on the use of equipment; Psychological support; Providing counseling and consultations; Ensuring adequate protective measures.
Chew NWS et al., 2020. Singapur[43]	Cross-sectional study. It assessed the prevalence of physical and psychological symptoms in the professionals.	Advice can be provided to mitigate the fear of transmitting the virus to family members; Multidisciplinary interventions to offer support; Psychological support to the professionals who present physical symptoms after discarding coronavirus infection.
Sun N et al., 2020. China[25]	Qualitative study. It identified the nurses' experiences in the care of COVID-19 patients.	Early psychological intervention; Stress assessment and screening; Provision of material and human resources; Adequate training; Offering assistance to the nurses' family members; Practices of psychological protective measures: breathing to relax, music, meditation, *mindfulness* exercises; Social support.
Black JRM et al., 2020. United Kingdom[44]	Opinion article. It focused on the importance of performing diagnostic tests for coronavirus.	Mass testing in health professionals (both symptomatic and asymptomatic) was identified as a means of relieving anxiety.
Al Knawy BA et al., 2015. Saudi Arabia[19]	Qualitative study. It identified the perceptions of the health professionals during MERS.	Mental health counseling and support, since the high anxiety levels were related to lack of mental health support; Management of national crises, to reduce anxiety in health professionals.
Wu PE et al., 2020. Canada[46]	Opinion article. It assessed the psychological effects of the pandemic on the health professionals.	Relief strategies in all the scenarios are vital to ensure psychological well-being; Frequent, fast and clear hospital communication; Strong social support network; Mental health support.
Zhang C et al., 2020. China[40]	Cross-sectional study. It analyzed insomnia and the health professionals' psychological and social factors.	Clarity in the plans, policies and procedures; Understanding what is happening and how the team is adapting to the general operations; their roles and expectations can help to stay focused, avoiding the uncertainties that generate anxiety; Behavioral cognitive therapy for insomnia, including relaxation therapy, among others.

Chart 1 – Cont.

Author/ Year/Locus	Methodology	Results
Kang J et al., 2018. South Korea[18]	Qualitative study. It assessed the barriers to the use of PPE during and after the MERS outbreak.	The CCIH leaders must allow health professionals to use their own methods for relieving anxiety.
Zhu J et al., 2020. China[31]	A cross-sectional study. It identified prevalence and factors that exert an influence on anxiety and depression symptoms.	Reduction of inadequate coping behaviors; Better perception of the factors that trigger stress; Adoption of a positive coping style in the crisis, improving negative emotions.
Lai J et al., 2020. China[32]	A cross-sectional study. It assessed the factors associated with mental health: professionals who were in charge of the care of COVID-19 patients.	Paying special attention to the mental health of the female nurses who cared for COVID-19 patients, as the results showed that being a woman was a risk factor for developing more severe anxiety levels.
Lee SM et al., 2018. South Korea[17]	Cross-sectional study. It assessed the understanding of the psychological impact experienced by the workers during and after MERS.	Increased awareness about the mental health issues; Development of psychological protocols during the isolation quarantine period; Psychiatric interventions.
Li W et al., 2020. China[30]	Literature review. It analyzed the mental health services during the COVID-19 pandemic.	Integration of the intervention in psychological crises to the disease prevention general department; Development and implementation of the intervention protocol in psychological emergencies; The specialists in mental health must take the lead in the interventions in psychological crises and related activities; Publication of guidelines and instructions for the mental health service by the mental health and academic associations; National Manual of Mental Health for the New Coronavirus Outbreak; Psychological interventions during the pandemic; It launched the 'Psychological Adjustment Guideline' to address the new coronavirus for specific populations; Online consulting, crisis response services and teams to provide education in health; Implementation of the Support System to strengthen lung and mental health.
Liang Y et al., 2020. China[39]	Opinion article. It assessed the mental health of the professionals during the COVID-19 outbreak.	Reasonable rest for the team; Leisure activities; Pre-employment training and psychological counseling using anxiety assessment scales as monitoring tools.
Gan X et al., 2020. China[33]	Cross-sectional study. It analyzed the relation between nurses and work-associated factors during the pandemic.	Professional support must be provided to promote the nurses' psychological health, not only during an infectious disease outbreak, but also as routine practice.
Cai H et al., 2020. China[34]	Cross-sectional study. It assessed the psychological impact and the coping strategies of the "front line" team during COVID-19.	Effective control of infections, personal protection measures, clear institutional policies and protocols; Recognition and appreciation of the professionals' work and efforts; Family safety was the biggest impact in reducing the team's anxiety; Positive attitudes of the work colleagues.

Chart 1 – Cont.

Author/ Year/Locus	Methodology	Results
Pappa S et al., 2020. United Kingdom[45]	Systematic review and meta-analysis. It synthesized and analyzed existing evidence of the prevalence of depression, anxiety and insomnia among the health professionals during COVID-19.	Clear communication; Provision of rest areas; Provision of mental health support through a hotline of teams, media or multidisciplinary teams; Early detection and importance of noticing and treating the clinical and psychiatric symptoms; Mental health support is necessary even for mild psychological reactions.
Lancee WJ et al., 2010. Canada[16]	Cohort study. It identified the incidence of psychiatric disorders (among the professionals) after the SARS outbreak, as well as the risk factors.	The professionals' attention to their own personal risk allows for a quick response to emergent symptoms related to anxiety; Effective practical and emotional support; Training sessions and personal protection.
Ni MY et al., 2020. China[35]	Cross-sectional study. It assessed the risk factors for anxiety in the community and among the health professionals.	Social support must be maintained as the key to emotional support; Use of online platforms to conduct psychological counseling; Psychosocial support; Provision of protective equipment.
Sheng X et al., 2020. China[36]	Cross-sectional study. It investigated the psychological status and sleep quality of the nurses in collective isolation.	Focusing on the nurses' psychological needs in the formulation of the psychological intervention program; Timely reporting on the progress of the epidemic prevention and control measures.
Chen Q et al., 2020. China[37]	This is an experience report from a University Hospital in Hunan, which initiated actions and modified sectors to give priority to COVID-19.	Development of a psychological intervention plan: medical team for psychological intervention; psychological assistance team by telephone calls; psychological interventions with group activities to relieve stress; Skills training for the management of anxiety, panic and other emotional problems; Moments of leisure and training on relaxation.
Liu, CY et al., 2020. China[38]	Cross-sectional study. It estimated the prevalence of anxiety in the health team.	Early initiatives for the implementation of actions that mitigate mental symptoms; Governmental support; Identification of the need to implement measures that protect the workers' mental health; Psychological counseling to the professionals.

Mean of anxiety

The overall combined mean of anxiety in the nurses was 44% (95% CI = 0.31 – 0.57, I2 = 99%) and that of the health professionals was 35% (95% CI = 0.25 – 0.45, I2 = 99%), as shown in Figure 2.

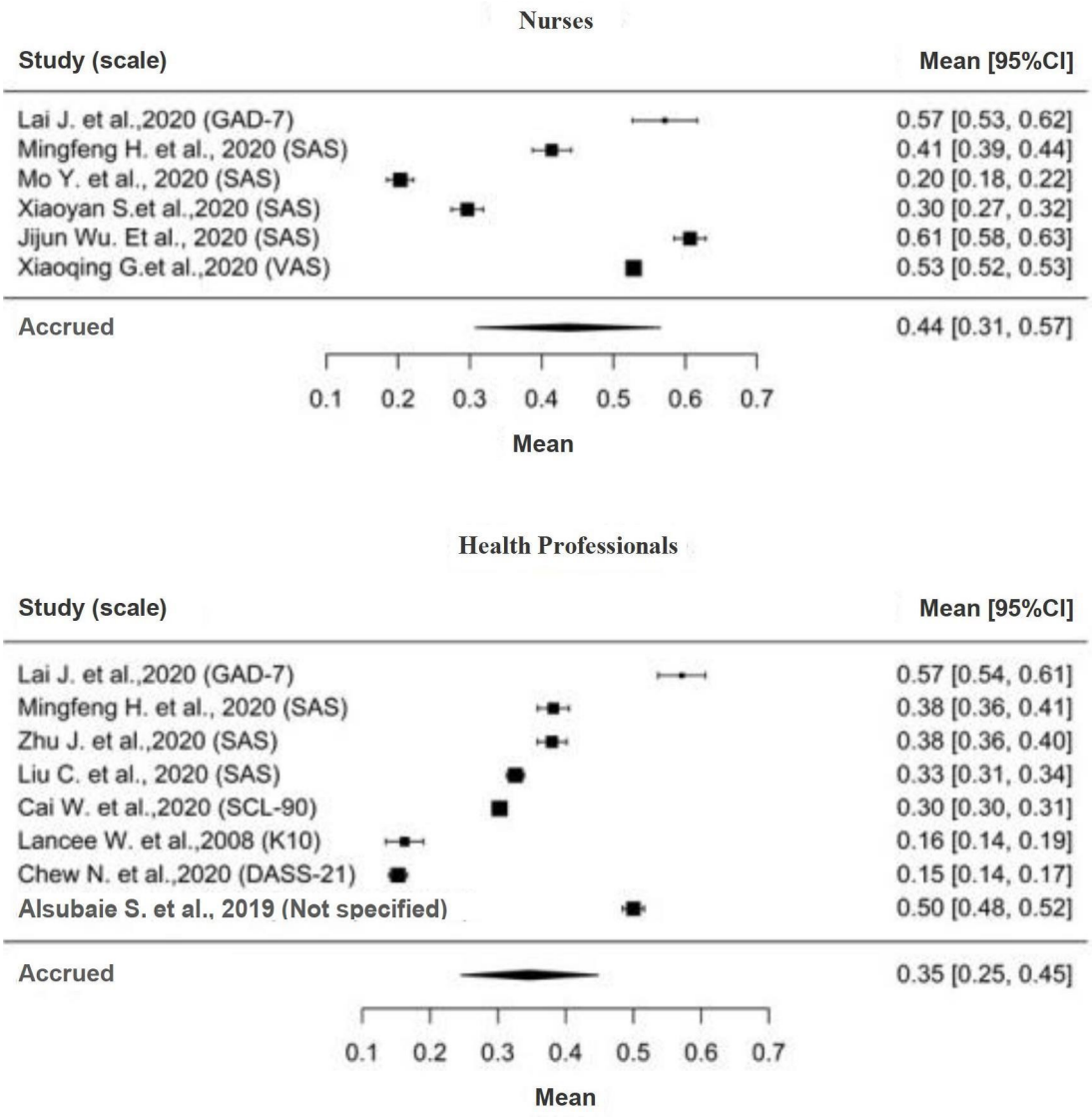

Figure 2 – Forest graph of the anxiety score. Brazil, 2010-2020.

With regard to the scales used to assess anxiety in the Nursing professionals, one study used the 7-item Generalized Anxiety Disorder scale (GAD 7)[32], with a mean of 9.16, scoring between medium and moderate anxiety; four studies used the Self-Rating Anxiety Scale (SAS)[27,29,31,36], with a mean of 46.4, scoring from medium to moderate anxiety; and one study used the Visual Analogue Scale (VAS)[45], with a mean of 44, scoring from normal to medium anxiety. In the assessment of anxiety in health professionals, one study used the 7-item GAD 7[32], with a mean of 7.35, scoring medium anxiety; three studies used the SAS[26,31,38], with a mean of 41, scoring normal anxiety; one study used the Symptom Checklist-90 (SCL-90)[24], with a mean of 1.40, scoring from little to moderate anxiety; another used the Kessler Psychological Distress Scale (K10)[16], with a mean of 24, scoring high anxiety, and one study applied the Depression, Anxiety and Stress Scale (DASS-21)[43], with a mean of 7.35, scoring between normal and medium anxiety.

Interventions for the management of anxiety

The interventions were detailed in Chart 1. Four categories emerged during the narrative synthesis of all the interventions used for the management of anxiety, namely: emotional support; strategies to relieve anxiety; welcoming work environment; and implementation of safety policies.

Emotional support

Emotional support was mentioned as an intervention in 12 articles[19–20,25–26,29–30,32–33,35,38,43,46], encompassing 15 subcategories, which are shown in Figure 3.

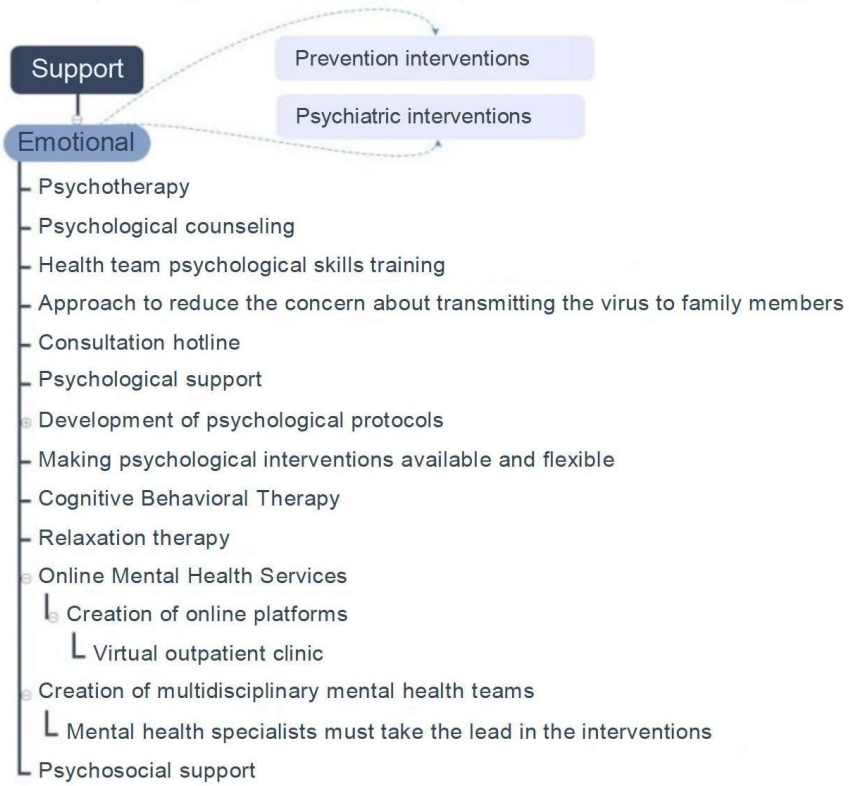

Figure 3 – Organizational chart of the emotional support category. Brazil, 2010-2020.

Strategies to relieve anxiety

The strategies to relieve anxiety, presented in seven articles[19,22,25,30–31,34,46], emphasized the adoption of positive coping styles, which are described in Figure 4.

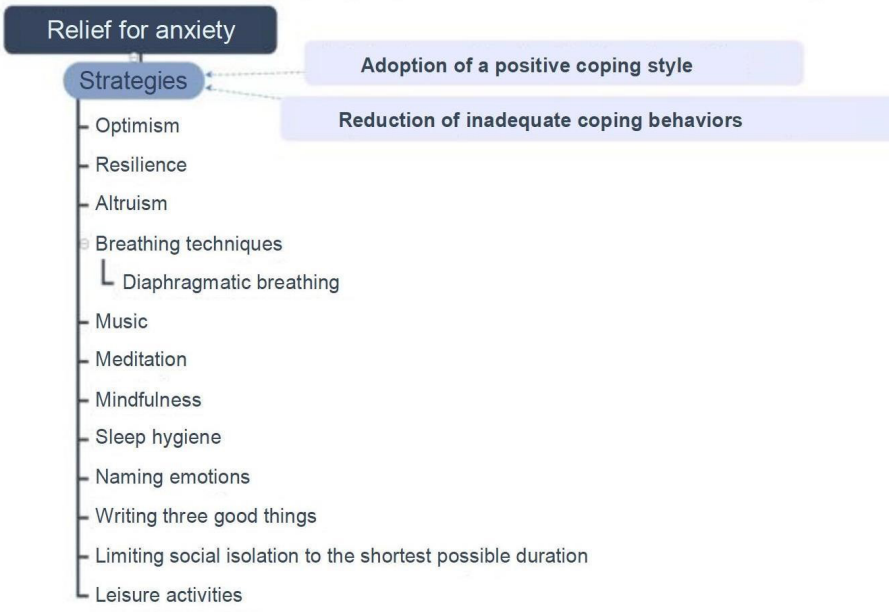

Figure 4 – Organization chart of the anxiety relief category. Brazil, 2010-2020.

Welcoming work environment

A welcoming work environment, present in 13 articles[16,19,21–22,25–26,28–29,33,35,42,46], proved to have strengthening potential for low anxiety levels and grouped important factors that make it possible to achieve this goal, such as: strong leadership[46], with a calm leader who listens to the team[21], using their biomedical and psychological knowledge to deal with the team's and their own psychological status[25] and who coordinates the activities, allocating patients according to the skill of each member of the Nursing team[28], which indirectly helps to familiarize the team with the procedures and the workplace[28]; communication and regular updates of cases of patients infected by COVID-19, through regular meetings and online platforms[28]; and encouragement of mutual care measures among the team members, through communication between coworkers who present similar feelings and experiences[28,29], which will reflect in positive attitudes[34] and gratitude by the team[22]. In addition to the important role of the Nursing team leader, health institutions must carry out educational training and capacity-building campaigns to strengthen COVID-19 knowledge and copying skills[16,19,25,29,34,45], observing the need to develop programs aimed at each category of health worker[19].

Nursing professionals must be encouraged to seek social support[25–26,29,35,42] through video calls and virtual meetings with friends and family members during social isolation[46]. In addition, recognition of their work by the community proved to be fundamental in reducing their anxiety during the SARS-CoV-2 pandemic.

Implementation of safety policies

Safety policies are part of a larger strategy plan to reduce anxiety, as they involve the governmental sphere. This category was present in 14 articles[19,22,24–25,27–30,33–37,45], describing the importance of a comprehensive infectious disease prevention system[27] in order to ensure protective measures[19,34–35,37,45], and to conduct mass testing[25] and clinical screenings[22,24–25,29,36]. One of the main points during the implementation of the political plans is the need for clear institutional protocols[30,34] to guide the procedures of all the health professionals. It is emphasized that better working conditions[29,34] – such as ensuring adequate human resources[25,27], offering assistance[25,34], adjusting the work shift[28], and providing reasonable rest[28] and rest areas for the Nursing professionals[33,37] – are the key to reducing anxiety in this category that is at the front line during the pandemic.

DISCUSSION

This systematic review analyzed the mean of anxiety and the interventions proposed to reduce anxiety in Nursing professionals, in the context of outbreaks and pandemics that caused SARS in 31 articles, without time limit or language preference because, in view of the current pandemic by SARS-CoV-2, it becomes urgent to analyze high-quality data on the effects of SARS on the health professionals who are at the front line, especially nurses[47], who are at greater risk due to exposure to COVID-19 patients, to their care activities with more direct contact, and for being in charge of collecting virus detection tests[48].

This systematic review addressed 15 cross-sectional articles, 1 cohort article, 2 review articles, 8 opinion articles, and 4 qualitative studies. The meta-analysis was carried out with 12 articles, evidencing a large proportion of nurses and health professionals with high anxiety levels, although emphasizing that the Nursing professionals present higher anxiety mean values.

Although the different scales and cutoff points adopted by each study have introduced certain heterogeneity in the meta-analysis, it can be observed that, in most cases, the Nursing professionals experienced medium to moderate anxiety levels, while severe levels were less common; however, when compared to the levels of other health professionals, Nursing showed a higher estimated anxiety

level[48], which demonstrates the need for clinical anxiety screening as a form of early and preventive intervention in the evolution of anxiety as a symptom for disorders.

Other strategies addressed were the following: better working conditions for the Nursing professionals, which include adjusting the work shift, favoring reasonable rest for this category, as well as providing rest areas in the workplace and offering assistance. This assistance includes the government's benefit strategies in case of contagion, such as workers' compensation insurance[28]; providing equipment to enable online chats between the Nursing professionals and their family members during isolation[28]; and offering online mental health services[30], preferably provided by multidisciplinary mental health teams[22,43,45].

The importance of the Nursing professionals' adherence to the anxiety management interventions is emphasized, especially in the current context of the COVID-19 pandemic, in which time is something rare for this population[49]. For this reason, a study[22] proposed micro-practices for managing anxiety that can be performed during the work routine, such as: practicing breathing techniques to relax, practicing *mindfulness*, writing three good things and naming emotions. Some of the practices presented were previously addressed by theorist Peplau, a psychiatric nurse, who described the nurses' activities based on interpersonal relationships (IRs) in Nursing, conceptualizing anxiety as the key to IRs. Therefore, during their training, nurses learn to name and manage anxiety.

In view of the above, the synthesis of evidence of interventions for anxiety in front line care professionals during the current pandemic is extremely necessary, as these are the individuals who exert direct and indirect influences on the control of COVID-19, because they take care of infected patients and family members and carry out education in health for the prevention and control of the disease.

The limitations of this study included the methodological heterogeneity of the included studies; the low number of articles included in the meta-analysis; and the fact that the results on anxiety found in the studies are very different so that, when combined, they presented a high degree of heterogeneity. The generalization of the findings should be limited, since most of the studies were conducted in China, and the health systems and the implementation of safety policies are varied worldwide. In addition to that, most of the papers included in the meta-analysis are cross-sectional studies, requiring long-term follow-up studies to enable greater understanding of the prevalence of anxiety in this population.

Despite the limitations, it is worth mentioning that the results observed in this study contribute to the establishment of specific strategies, in addition to more assertive management strategies, in the face of anxiety in the healthcare staff, in order to prevent and treat the professionals affected by this condition, resulting in better care to the patients and family members under their care.

CONCLUSION

The synthesis of evidence of strategies for the management of anxiety in Nursing professionals, key actors in COVID-19 prevention and control, is fundamental to translate scientific knowledge into health practice. From this synthesis, it was possible to identify the main interventions to reduce anxiety, such as emotional support, positive coping techniques, a welcoming work environment, and implementation of policies that ensure protective measures against the disease caused by SARS-CoV-2, considering previous experiences in fighting SARS and MERS. Such knowledge may be applied in the development of a protocol for the management of anxiety for Nursing professionals.

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NOTES

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