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The impact of the COVID-19 pandemic on the Mental Health of Healthcare Professionals: Integrative Literature Review

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Abstract

Background: During the pandemic of the infectious disease caused by the coronavirus (COVID - 19) it is important to discuss its impact on the mental health of Healthcare Professionals who work in a hospital environment.
Objective: To analyse the impact of COVID-19 on the mental health of Healthcare Professionals working in Hospital Services.
Methodology: This is an Integrative Literature Review, where have been formulated the following question: What is the impact of COVID-19 on the Mental Health of Healthcare Professionals working in Hospital Services?" using the PICO method. The inclusion criteria were applied for articles published between 2019 and December 2021, qualitative and quantitative, and articles carried out in hospital services. The exclusion criteria were systematic literature reviews, integrative literature reviews, articles that do not address the topic under study, paid articles or that do not allow access to full text and duplicate articles. This selection process resulted in 5 articles that were submitted to a quality assessment.
Results: In the analysis of the 5 studies, high levels of several psychopathological changes were identified in the health professionals questioned. These studies show high rates of anxiety, depression, stress, sleep disturbances, burnout, and common mental disorders.
Conclusions: The levels of psychopathological changes were already significant in the pre-pandemic period. However, they worsened during the pandemic.

Keywords: Healthcare Professionals, SARS-COV-2, COVID-19, Hospital Services, Mental Health

1. Introduction

In the context of the Curricular Unit Clinical Teaching V, included in the 2nd semester of the 4th year of the 18th Degree Course in Nursing of the Escola Superior de Saúde da Universidade de Aveiro (ESSUA) in the academic year 2021/2022, the preparation of an Integrative Literature Review (ILR) was proposed. Literature reviews have been increasingly used by healthcare professionals to assimilate the results of studies within the scope of Evidence-Based Practice (EBP) and consequently of healthcare (Mendes et. al, 2008).

The integrative literature review is a specific method, to gather the scientific knowledge already produced on the investigated theme in a systematic, ordered, and in-depth manner. This type of review is called integrative precisely because it provides broader information on an issue, thus constituting a body of knowledge. In this case, the purpose of the ILR is to methodologically analyse studies on a particular topic (Gomes et al., 2020).

To provide a better context for this ILR, it is important to highlight the concept of mental health and COVID-19. The World Health Organization (WHO) defines mental health as a state of well-being in which an individual develops personal skills, can cope with the stresses of life, works productively and is able to contribute to the community (Gaino et al., 2018). According to the WHO, COVID-19 is an "infectious disease caused by the SARS-CoV-2 coronavirus, which can cause severe respiratory infection such as pneumonia" (NHS, 2022). On March 13, 2020, with the number of cases and deaths increasing, the WHO declares the start of a pandemic (SNS, 2020).

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This topic is pertinent in the current context, as since 2020 we are facing a pandemic of COVID-19, which has caused several changes in people's daily lives, particularly for healthcare professionals. Thus, a constant and difficult adaptation was required from these professionals to a new reality that generated changes in their mental health and undermined their ability to provide quality care. The topic addressed is of high relevance to the group, since we are at the beginning of our professional life and we need to be informed about the possible mental health changes, that we may be exposed to, so that we can play an active role in the recovery of the multidisciplinary team, pointing out the importance of appropriate coping mechanisms. Based on the concepts presented above and after the application of the PICO method, we formulated the following research question: "What is the impact of COVID-19 on the Mental Health of Healthcare Professionals working in Hospital Services?".

The objective of this ILR is to analyse the impact of COVID-19 on the mental health of Healthcare Professionals working in hospital settings.

2. Methodology

ILR is a research method that allows the search, critical evaluation, and synthesis of the available evidence on an investigated topic. The final product is the state of knowledge of the topic investigated, the implementation of effective interventions in care providing and cost reduction. Furthermore, it allows the identification of weaknesses, which may lead to the development of future research. This literary approach is called integrative since it provides broad information on a subject/problem. Therefore, it constitutes a comprehensive body of knowledge of methodological rigour (Mendes et al., 2008).

This research method contemplates six distinct phases: 1) identify the topic and select the hypotheses or research questions in order to design an integrative review; 2) define inclusion and exclusion criteria of studies/sampling or literature search; 3) define/categorise the information to be extracted from the selected studies;4) evaluate the quality of the studies included in the ILR; 5) perform a detailed interpretation of the results obtained; 6) present a synthesis of knowledge (Botelho et. al, 2011).

To formulate the research question, we used the PICO method. Initially we defined the "Target Population" of the study, the Healthcare Professionals, then the "Intervention" or area of interest, in this case, the effects of COVID-19, then we selected Hospital Services for the "Context" and finally the "Results" or Outcomes, the impact on mental health. After the application of this method, we formulated the following research question: "What is the impact of COVID-19 on the mental health of Healthcare Professionals working in Hospital Services?". The goal will be to analyse the impact of COVID-19 on the mental health of Healthcare Professionals working in Hospital environment. Based on the PICO method, we selected the following descriptors/keywords according to DeCS: Healthcare Professionals, SARS-CoV-2, COVID-19, Hospital Services and Mental Health. Subsequently, for the creation of search keys, we used these descriptors and the Boolean operator "AND".

Next, the inclusion and exclusion criteria were defined, being the first: articles published between 2019 and December 2021, qualitative and quantitative studies, and studies conducted in hospital services. On the other hand, the exclusion criteria were systematic literature reviews and integrative literature reviews, articles that did not address the subject of the study, paid articles or articles that did not allow access to the full text, and duplicate articles. The research was realised in the databases, Scielo, RCAAP, PubMed, Google Scholar, LILACS, and EBSCO, in the period from February 22 to March 02, 2022. The search keys used in this selection phase that allowed us to obtain the 5 studies included in this ILR were "Health Professionals" AND "COVID-19" AND "Hospital Services" AND "Mental Health" and "Health Professionals" AND "COVID-19" AND "Mental Health".

In order to evaluate the quality of the selected articles, we applied the Kmet scale (Standard Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields) to each article. This scale was created to stimulate discussion/debate between researchers and increase their ability to make a critical judgement about the studies appropriate for their reviews. There are two scoring systems: one for quantitative research reports and another for qualitative research reports.

To perform the quality assessment of the included studies, two assessments were performed for each study by different reviewers, using the Kmet Scale (Kmet, Lee & Cook, 2004). The two assessments were then averaged and all articles with a quality lower than 0.75 were excluded (Chart 1). Based on this assessment, we selected 3 quantitative articles and 2 quali-quantitative articles.

To make the structure of the document easier, we have assigned each study a number from 1 to 5.

• Study 1: "Ansiedade e Depressão entre Profissionais de Enfermagem em UPA durante a Pandemia da Covid-19";
• Study 2: "Fatores associados à ansiedade em residentes multiprofissionais em saúde durante a pandemia por COVID-19"
• Study 3: "Impacto na saúde mental e qualidade do sono de profissionais da enfermagem durante pandemia da COVID-19"
• Study 4: "O estresse e a saúde mental de profissionais da linha de frente da COVID-19 em hospital geral"
• Study 5: "Transtornos Mentais Comuns em Trabalhadores de uma Unidade de Terapia Intensiva"

	Researcher 1	**Researcher 2**	**Average score**
Study 1 – quantitative	0,80	0,70	0,75
Study 2 – quantitative	0,90	0,90	0,90
Study 3 – quantitative	0,90	0,80	0,85
Study 3 – qualitative	0,75	0,75	0,75
Study 4 – quantitative	0,90	0,90	0,90
Study 4 – qualitative	0,75	0,75	0,75
Study 5 – quantitative	0,85	0,95	0,90

Table 1: Quality assessment of the studies

A total of 55 687 studies/articles were identified. After the analysis of the titles and abstracts, they were reviewed and categorised according to the pre-established inclusion and exclusion criteria. Then, they were screened for relevance and appropriateness about the objective of this ILR, resulting in a final sample of 5 articles, as shown in the flowchart in Figure 1.

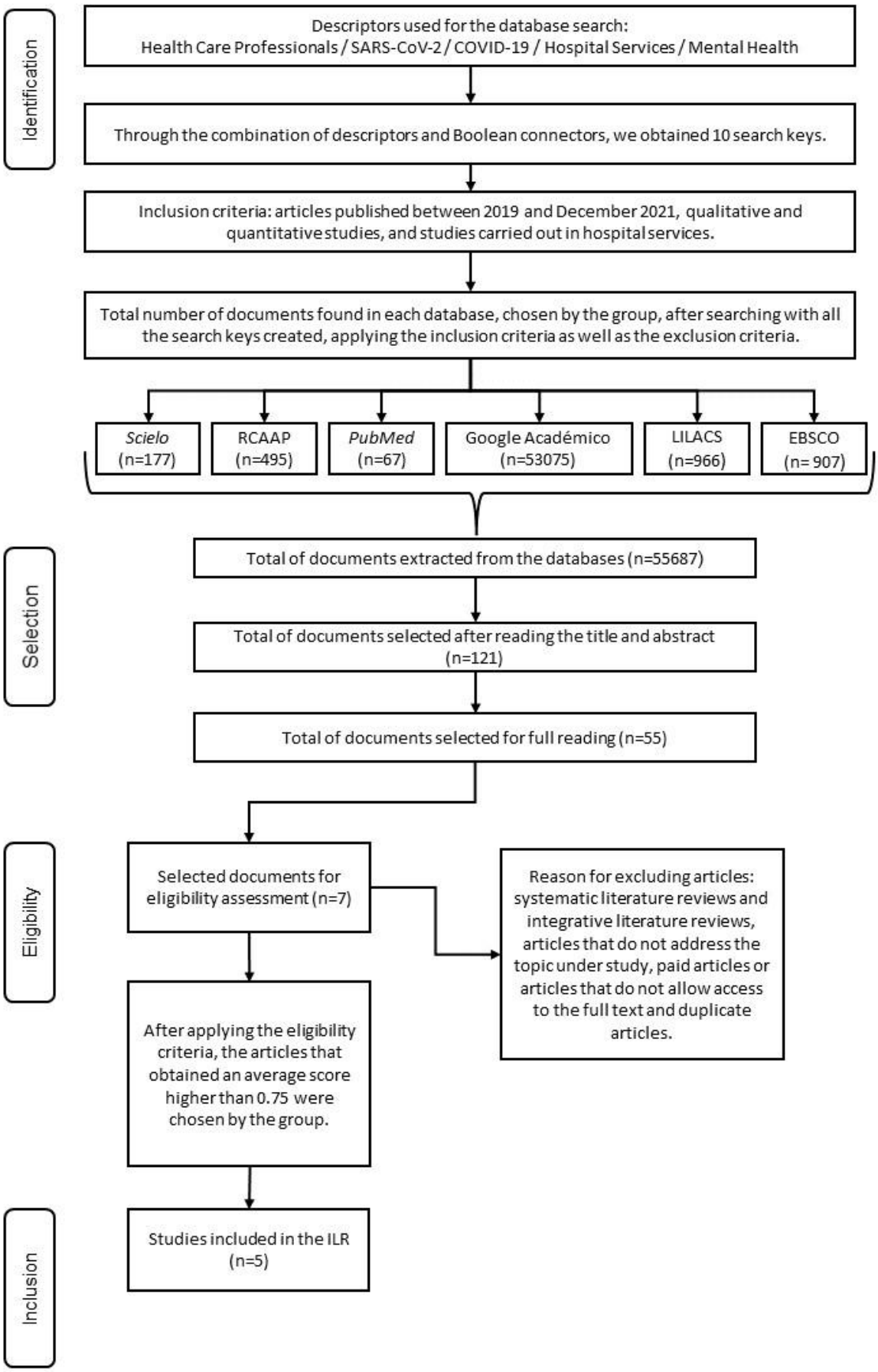

Figure 1: Flowchart of study selection from the PRISMA protocol

As can be seen in the flowchart presented in Figure 1, when we start the research in the different databases with the use of the previously defined descriptors together with the Boolean operators, several search keys were created. By applying the inclusion criteria of "articles published between 2019 and September 2021", "quantitative and qualitative studies" and "studies conducted in hospital services", and the exclusion criteria of "systematic and integrative literature reviews", "articles that do not address the topic under study", "paid articles or articles that do not allow access to the full text" and "duplicate articles" a total of 55 687 articles were obtained. Next, the group selected 121 articles after reading their title and/or abstract, where only 55 were selected for full reading. Of the 55 articles, only 7 were selected for eligibility assessment, as their study population was not what the group intended for this integrative review. Of the total of 7 articles, only 5 obtained a score equal or higher than 0.75 by the Kmet scale. In conclusion, the final sample consists of 5 articles.

3. Results

After the analysis of the 5 studies mentioned above, we will present a brief description of their characterisation. All the studies mentioned above were conducted in Brazil between 2020 and 2021. Studies 1, 2 and 5 are quantitative and studies 3 and 4 are quali-quantitative. As for study 1, five visits were made to gather data between June and August 2020. During data collection, socio-demographic and professional data were collected where the Hospital Anxiety and Depression Scale was applied. With this, we intended to evaluate the anxiety and depression among healthcare professionals of an Emergency Care Unit (ECU). In this study participated 12 technicians, 11 nursing assistants and 7 nurses, being the majority female (80.0%), married (80.0%), married (40.0%) and aged between 41 and 50 years (36.7%).

Regarding study 2, in July 2020, a questionnaire prepared by the authors, containing sociodemographic variables, professional performance in residence, mental health profile, harassment, violence and coping of COVID-19. The instrument used to assess anxiety and its levels was the Beck Anxiety Inventory (BAI) scale, with the purpose of estimating the prevalence and factors associated with anxiety among multiprofessional health residents during the pandemic of COVID-19. In the aforementioned study, we faced residents from Multiprofessional Health Programs (Adult Intensive Care, Child Health, Cardiology and Psychosocial Care), nurses, psychologists, pharmacists, physiotherapists, nutritionists, social workers, and dental surgeons. Most of the multiprofessional residents present in this program were female, aged between 21 and 25 years old, lived without a partner, were nurses, integrated the Adult Intensive Care program and were in the first year of residency.

In study 3, the results were obtained through an online survey platform in July 2020 and three instruments were used for data collection: the Depression, Anxiety and Stress Scale (DASS-21), Leeds Sleep Evaluation Questionnaire (LSEQ) and Pittsburgh Sleep Quality Index (PSQI). In study 3, 104 nursing professionals participated. Most participants were between 21 and 30 years old (39.4%), being mostly women (89.4%) and from the professional category of nursing technician (71.1%). With this study, it was possible to assess the prevalence of depression, anxiety, stress, and quality of sleep of nursing professionals during the COVID-19 pandemic.

In relation to study 4, demographic variables, variables related to the working conditions and variables related to the professionals' health were applied. The participants answered 3 scales: Self-Reporting Questionnaire (SRQ-20), Perceived Stress Scale (PSS) and Oldenburg Burnout Inventory (OBI) between June and August 2020. In this study, 123 people participated, of which predominated female professionals (81%) in frontline activity with age equal to or less than 36 years in 50% of the interviews, with a mean of 37.4 years and ranging from 19 to 56 years. In their majority, the professionals who participated were nursing technicians and nurses. The purpose of this study is to investigate the effects of acting on the front line of COVID-19 on the mental health of professionals from public hospitals.

Concerning study 5, two questionnaires were used for the research, the Self Report Questionnaire and another that contained sociodemographic information, mental health treatment and individual work. The interviews were conducted in April 2021 and occurred through electronic Google forms. The participants were Physiotherapists, Physicians, Nurses, Speech Therapists, Nutritionists, Pharmacists and Nursing Technicians, totalling 91 participants. This study aims to analyse the prevalence of common mental disorders (CMD) and associated factors in health professionals in an ICU during the COVID-19 pandemic.

	Study 1	Study 2	Study 3	Study 4	Study 5
Title	"Ansiedade e Depressão entre Profissionais de Enfermagem em UPA durante a Pandemia da COVID-19"	"Fatores associados à ansiedade em residentes multiprofissionais em saúde durante a pandemia por COVID-19"	"Impacto na saúde mental e qualidade do sono de profissionais da enfermagem durante pandemia da COVID-19"	"O estresse e a saúde mental de profissionais da linha de frente da COVID-19 em hospital geral"	"Transtornos Mentais Comuns em Trabalhadores de uma Unidade de Terapia Intensiva"
Authors	Piffer, L., Schmidt, M. & Júnior, J.	Dantas, E., Filho, J., Silva, G., Silveira, M., Dantas, M. & Meira, K.	Maier, M. & Kanunfrel, C.	Horta, R., Camargo, E., Barbosa, M., Lantin, P., Sette, T., Lucini, C., Silveira, A., Zanini, L. & Lutzky, B.	Santos, W., Silva, R., Rodrigues, D., Farias, I. & Moura, G.
Type of study	Quantitative	Quantitative	Quali-quantitative	Quali-quantitative	Quantitative
Year	2021	2020	2021	2021	2021
Country	Brazil	Brazil	Brazil	Brazil	Brazil
Sample	30 healthcare professionals	67 multiprofessional health residents	104 nursing professionals	123 frontline healthcare professionals	91 healthcare professionals
Objective(s)	To evaluate anxiety and depression among nursing professionals in an Emergency Care Unit during the COVID-19 pandemic.	To estimate the prevalence and factors associated with anxiety among multiprofessional health residents during the pandemic of COVID-19.	To assess the prevalence of depression, anxiety, stress, and sleep quality of nursing professionals in the COVID-19 pandemic.	To investigate the effects on the mental health of public hospital professionals in the frontline work of COVID-19.	To analyse the prevalence of common mental disorders and associated factors in health professionals of an Intensive Care Unit of a University Hospital in Recife-Pernambuco during the pandemic of COVID-19.
Results	-16.7% of 30 health professionals had mild anxiety -13.3% had moderate anxiety. -3,3% manifested severe anxiety. -13.3% of the total number of health professionals showed mild depression.	-68.7% of the respondents had minimal to mild levels of anxiety. -31.3% had moderate to severe anxiety. -21 of the residents required psychological follow-up during the pandemic	-9% showed signs of mild anxiety. -19% presented signs of moderate anxiety. -6% showed signs of severe anxiety. -18% exhibited signs of extremely severe anxiety. -16% showed signs of mild depression. -19% showed signs of moderate depression. -3% showed signs of depression -10% presented signs of extremely severe depression. -51% exhibited signs of stress	-40% of the sample scored equal to or higher than 7 points in the Self-Reporting Questionnaire (SQR-20) -45% of the sample scored higher than 25 points in the Perceived Stress Scale (PSS) -41% of the sample obtained scores compatible with burnout in the Oldenburg Burnout Inventory (OBI)	- Presence of CMT was observed in 57.1% of the professionals -63.7% reported sleeping badly. -64.8% reported getting tired easily. -61.5% reported being tired all the time. - People with CMT presented 5.25 times more prevalence of psychotherapeutic follow-up, and the prevalence of use of anxiolytics and antidepressants was 6 times higher among them
Conclusions	The use of the Anxiety and Depression Scale was useful to identify the presence of anxiety and depression in healthcare professionals, as well as their level. However, it did not identify high scores during a pandemic period, due to the small sample size of the study.	The results seem to indicate that residents had their mental health damaged during the pandemic. However, the maintenance of the variables in the model also suggests that they looked for help to manage their anxiety.	Although the percentage of nursing professionals with sleep disturbance and stress is lower compared to the literature, the levels of anxiety, insomnia and depression are higher, supporting the impact of the pandemic on the mental health of nursing professionals.	The professionals presented a picture of psychosocial distress. It is recommended to give priority to rest and breaks, which may require adjustments of physical spaces and routines, and to expand the offer of emotional support to the teams.	In summary, a high frequency of mental health aggravations was found among the ICU workers, besides symptoms related to CMT. These data demonstrate the need to develop actions and strategies to prevent the effects of the pandemic on the physical and mental health of frontline workers.

Table 2: Descriptive synthesis of the selected studies

4. Discussion of the results

The objective of this ILR is to analyse the impact of COVID-19 on the mental health of healthcare professionals working in hospitals and to discuss the results of the five studies analysed and their inferences. These studies showed that the working conditions in times of pandemic caused several changes in the mental health of professionals. In the five studies that comprise our sample, several alterations were identified, namely anxiety, depression, burnout, stress, sleep disorders and common mental disorders.

When analysing the results of the qualitative studies, study 3 and study 4, we concluded that anxiety, depression, burnout and CMT also impacted the professionals' quality of sleep and created difficulties in the performance of their activities during the pandemic. The first study mentioned the sleep quality of professionals during the pandemic was assessed and evidence was shown that a high level of stress at work can lead to sleep problems such as insomnia. The study also states that healthcare professionals who presented with insomnia are more likely to develop anxiety and depression. In the interviews presented in study 4, evidence of psychological distress, such as stress, fear and insecurity, high attrition and frontline suffering were described. When analysing them in detail, some difficulties were highlighted, such as long shifts without breaks, pressure, and fatigue greater than they usually feel, isolation in the hospital and risk of contamination of themselves and their relatives. Living with COVID-19 infections daily, many professionals have seen their mental health affected.

Infection control measures and isolation, the overload of working hours and the fear of contamination contributed to the increase in the prevalence of the abovementioned psychopathologies.

According to Castillo et al. (2000), anxiety is defined as "a vague and unpleasant feeling of fear, apprehension, characterised by tension or discomfort derived from the anticipation of danger, of something unknown or strange" (p.20). Concerning anxiety, studies 1, 2 and 3 showed that there is a high incidence of anxiety in healthcare workers during the pandemic. The studies refer to 3 different levels of anxiety. For mild anxiety, study 1 shows 16.7%, study 2, 68.7% and study 3, 9% of the total healthcare professionals surveyed. For the levels of moderate and severe anxiety, study 1 presents 13.3% and 3.3%, and study 3 presents 19% and 6%, respectively. On the other hand, study 2 combines both values, making a total of 31.3%.

Studies 1 and 3 also examine the prevalence of depression in healthcare workers during the pandemic. According to Carvalho (2018), depression is characterised by a state of anhedonia, sadness, changes in sleep patterns, appetite, and concentration levels, feeling of asthenia, feelings of guilt and low self-esteem. This state can be lasting and recurrent, which affects the work capacity and productivity of healthcare professionals. The studies mentioned above evaluated the levels of depression through the Hospital Anxiety and Depression Scale (HADS) and the Depression, Anxiety and Stress Scale (DASS), showing mild depression values of 13.3% (study 1) and 16% (study 3). Study 3 presents values of moderate and severe depression, 19% and 3%, respectively. To corroborate the results presented above, we analysed a pre-pandemic study from 2016 which indicates that, through the assessment of the DASS, 27.4% of the participants have depression (Silva, 2017). This indicates, compared to studies 1 and 3, that the percentage of professionals with signs of depression tends to increase over the years and with the worsening of the pandemic.

In 2019, the World Health Organization began to define burnout as a disease, a state of physical and mental exhaustion that can be caused by the exercise of professional activity (WHO, 2019, as cited in Oliveira, 2021). The burnout syndrome is described as an emotional state of exhaustion, absence of personal fulfilment and depersonalisation. The high workload, lack of autonomy, stress, poor working conditions, and the performance of activities in constant contact with the public bring a higher risk of burnout in healthcare professionals (Borges et al., 2021; Jarruche & Mucci, 2021). Study 4 indicates that, for a sample of 123 healthcare professionals, burnout was present in 41% of the respondents.

Comparing the abovementioned study with a study published in 2016 on “Burnout em Profissionais da Saúde Portugueses”, this indicates that the occurrence of burnout syndrome in Portuguese healthcare professionals has been recurrent for several years, with poor working conditions being the factor that drives this constant permanence of signs and symptoms of burnout in the daily lives of these professionals. Between the years 2011 and 2013, 21.6% of the professionals surveyed presented moderate burnout and 47.8% high (Marôco et. al, 2016). The presence of this psychopathological change persisted over time. To prove this statement, a study from 2014 -2015, refers that the prevalence of burnout syndrome was 55.3% in the professionals addressed (Silva et. al, 2015). The interviews conducted in study 4, indicate that 45% of the group of professionals has moderate, high, or very high levels of stress. The stress experienced by frontline healthcare workers was exacerbated by the length of the working period with no rest breaks, the high risk of contamination and the lack of personal protective equipment required for safe care. This led to a constant feeling of insecurity, fear, high emotional distress and suffering. This information is confirmed through the qualitative data obtained from the interviews carried out in study 4.

> "...with suspected corona who had a cardiac arrest, and the care was without the correct use of PPE... I went on a shoestring. I took a risk, then I thought..." (Nursing technician, 34 years old)
> "I work 12h without being able to go to the bathroom, eat or drink water, because there is nowhere to go... it's a lot of pressure all the time." (Nursing technician, 32 years)
> Original in portuguese:
> "...com suspeita de corona que teve uma parada cardíaca e o atendimento foi feito sem o uso correto de EPIs... Eu fui na cara e na coragem. Eu me arrisquei, depois eu pensei." (Técnica de enfermagem, 34 anos) "Trabalho 12h sem poder ir no banheiro, comer ou tomar água, porque não tem onde... é muita pressão o tempo todo." (Técnica de enfermagem, 32 anos)

One of the psychopathological disorders mentioned throughout this ILR is stress, a dependent variable, a response to a disturbing stimulus (Hespanhol, 2005). According to the DASS, stress is characterised by a high difficulty in relaxing, nervousness, agitation, irritability, and impatience (Apóstolo et al., 2006).

Regarding the psychological level, manifestations of stress are also related to the occurrence of anxiety, depression and altered sleep pattern, these may lead to the appearance of nervous tics, chronic fatigue, indecisiveness, decreased work capacity and the development of addictive behaviours as a coping mechanism (excessive spending, smoking, alcoholism, etc.) (Hespanhol, 2005, p.160). About the responses to the DASS questionnaire presented in study 3, it was identified that 51% of respondents presented some symptom of stress, 48% presented signs of depression and 52% symptoms of anxiety. Through analysis of the responses obtained for the Pittsburgh Sleep Quality Index, it was found that 75% of the professionals surveyed showed sleep disturbance and 68% insomnia. This study also established a relationship between the quality of sleep and the presence of stress, anxiety, and depression during the pandemic. As mentioned in the study, the high prevalence of stress at work may result in alterations in sleep patterns, such as insomnia and easily waking up from sleep. These changes also contribute to the development of functional immune and nervous system problems, increased onset of cardiovascular and metabolic diseases and difficulty in concentration and performance in everyday life (Almojali et al., 2017; Choi et al., 2012; Niu et al., 2011, as cited in Maier & Kanunfre, 2021).

Sleep quality is considered one of the fundamental dimensions for the evaluation of restful sleep and sleep-wake pattern. Sleep deprivation and its alterations of the normal sleep pattern can have implications on the individual's quality of life, inflammatory processes, mortality rate, and the increased incidence of cardiovascular diseases, psychopathological alterations, and metabolic diseases (Barros et. al, 2019).

According to Goldberg & Huxley (1992), common mental disorders, refer to any "health condition that does not fulfil sufficient formal criteria for diagnoses of depression and/or anxiety, but generate suffering, symptoms such as insomnia, fatigue, somatic complaints, forgetfulness, irritability, difficulty in concentration, among others, cause functional incapacitation, leading to psychosocial losses for the individual". (Goldberg & Huxley, 1992, as cited in Santos et al., 2021). Study 4 reports that 40% of the participants presented scores compatible with CMD. In turn, study 5 indicates that 57.1% of the professionals present CMD. This leads to the development of some symptoms such as: sleeping poorly 63.7%, getting tired easily 64.8%, tired all the time 61.5%, nervousness 70.3%, headache 53.8% and feeling sad 58.2%. Comparing the symptoms of CMD in the pre-pandemic period, in a study published in 2015 was detected that 27.9% of professionals had CMD. In this study, the symptoms experienced with the respective percentages are also presented, which allows us to conclude that the number of professionals affected was lower. Therefore, 45.1% of the respondents sleep poorly; 32.6% tire easily; 34.5% are tired all the time; 64.6% show signs of nervousness; 39% refer headaches and 35.4% feel sad (Alves et al., 2015).

According to Lazarus and Folkman (1984), coping refers to the cognitive and behavioural efforts made by individuals to cope with specific internal or external situations that exceed their capacities/limits (as cited in Campos, 2012). In order to relieve the signs and symptoms of the deteriorating mental health status of healthcare workers in the context of a pandemic, coping strategies can be applied, such as maintaining positive thinking, accepting the situation and learning to cope with the changes caused by the virus; staying busy with different physical or leisure activities; avoiding unpleasant feelings; seeking comfort, emotional support and understanding from family/friends (Vasconcelos, 2021). Other strategies include reducing the workload, increasing the professionals' rest periods; referring professionals to psychotherapists, psychiatrists and psychologists; encouraging actions such as meditation and other activities to reduce emotional stress, avoiding harmful coping strategies; strengthening resilience in each individual; raising awareness and involving the population in awareness-raising measures to reduce the number of professionals with psychopathological changes (Ho et al., 2020; Petzold et al., 2020; Li et al., 2020, as cited in Barbosa et. al, 2020).

5. Conclusion

Healthcare professionals, in their daily lives, are subjected to various stressful situations, anxiety, fear and the need for rapid intervention. Simultaneously the emergence of the pandemic has worsened these feelings and unexpected situations. In response to the research question, different pathological changes were identified, such as stress, anxiety, depression, changes in sleep patterns, burnout, and common mental disorders. Subsequently, the different selected studies were analysed and the percentages of the alterations in the healthcare professionals surveyed during pandemic times were demonstrated. With this, we found that there was an increase in the prevalence of these pathologies when compared to pre-pandemic values.

The limitations identified in the execution of this ILR include the small number of relevant studies found, both Portuguese and foreign, given that the theme is recent. Another limitation is the small sample size of healthcare professionals surveyed in the studies, which leads to the variety of the final results obtained not being so diversified. In conclusion, the results indicate that the psychopathological changes mentioned were already known but worsened with the pandemic and the poor working conditions that resulted from it.

We intend to alert that it is necessary to continue to question healthcare professionals about their working conditions, their mental and physical health, their capacity to provide quality care and their ability to adapt to unforeseeable situations such as the pandemic and bad working conditions that resulted from it. These analyses enable the application of new adaptive measures, coping strategies and better psychological monitoring of healthcare professionals.

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