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PSYCHOLOGICAL INTERVENTIONS FOR HEALTHCARE PROFESSIONALS DURING THE COVID-19 PANDEMIC: A SYSTEMATIC REVIEW

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ABSTRACT:

Healthcare professionals were especially vulnerable to pandemic, both to become infected and to develop a psychological problem. The aim of this systematic review is to analyse the effectiveness of psychological interventions for healthcare professionals in reducing the experienced psychological impact. From the 405 identified studies, 10 were included in this review. Four databases were searched and the risk of bias of included studies was assessed. The studies considered were randomized controlled trials. The screening and selection process was conducted by two independent reviewers. All studies presented results related with depression, anxiety, and stress during pandemic. Six were delivered using new technologies. The most effective were two psychological interventions with frequent contact and feedback provided by a mental health professional. The psychological interventions compared with non-intervention groups presented more significant results than those compared with another intervention. The highlights of this systematic review were the urgency of designing effectiveness psychological interventions for healthcare professionals to reduce the emotional burden associate with this job. These interventions should be maintained over the time, supported by a professional and provided from the workplace. These proposals presented promising results but were more psychological resources than psychological interventions.

Keywords- COVID-19 Pandemic, Randomized Controlled Trials (RCT), Healthcare, Psychological Impact, Precarious Conditions, Emotional Burden Related.

INTRODUCTION:

Since December 2019, the novel coronavirus or COVID-19 has spread rapidly across the whole world, becoming a global pandemic on March 2020 according to the World Health Organization (WHO, 2020). New coronavirus infection has had a major impact on mental health. Population received an increasing amount of uncertain information about the disease (Torales et al., 2020). The immediate consequences were fear of uncertainty, panic, distress, a feeling of losing control, anger, frustration, and vulnerability (Bao et al., 2020; Brooks et al., 2020; Rajkumar, 2020). Accordingly, psychological problems

like depression, anxiety and stress have increased during this period in general population (Salari et al., 2020). Additionally, an increase of suicidal thoughts and behaviours have been observed in relation to the appearance of infectious diseases epidemics (Rodgers et al., 2021). Healthcare professionals were especially vulnerable to this health crisis, presenting 12 time more risk than general population to get infected (Nguyen et al., 2020). These workers had an essential role in the quality of healthcare system during the pandemic (Bao et al., 2020). Disease exposure, the lack of protection and the saturation of sanitary resources forced these professionals to work in precarious conditions (García-Iglesias et al., 2020; Vieta et al., 2020). These situations had a direct impact on the mental health of these workers and, consequently, an indirect effect on the well-functioning of the sanitary system (Shultz et al., 2016; Yang et al., 2020). COVID-19 pandemic increased the prevalence of psychological problems like anxiety, depression, stress, post-traumatic stress disorder (PTSD), insomnia, and burnout between healthcare professionals (Lazzerini & Putoto, 2020; Li et al., 2020; Vieta et al., 2020). According to these results, previous systematic reviews reported high levels of anxiety (Pan et al., 2020) and PTSD (Carmassi et al., 2020) for this population. Other stressful experiences were the grief for relatives and/or patients, self-blame for not being able to save them, and fear of getting sick and infecting their families (Wallace et al., 2020). Health crisis, such as COVID-19, have required the use of adaptative coping strategies. However, many healthcare professionals presented problems in dealing with the pandemic due to the uncertainty of the situation and the lack of knowledge about the disease. To cope with psychological distress health workers reported the use of exercise (44.9%), social connections (31.7%) and alcohol (26.3%) (Smallwood et al., 2021). New technologies, especially psychological wellbeing applications, were also a resource used by this population (Smallwood et al., 2021). Previous studies found an association between burnout in health workers and patient safety, COVID-19 represented an extreme situation with the presence of these two variables (Hall et al., 2016). For all these reasons, healthcare professionals should be considered as a population risk to suffer psychological problems, especially in a health crisis like COVID-19 pandemic. Accordingly, the creation of psychological programs adapted to their needs is an urgency. During the first year of the pandemic, 6.4% of adult population requested psychological attention in Spain (Confederación Salud Mental, 2021). Different resources like phone assistance with brief psychological intervention were available. During quarantine the number of calls was

15,170, 75.3% needed an intervention (Berdullas-Saunders et al., 2020). However, the evidence for specialized psychological programs for healthcare professionals was limited. Muller et al. (2020) presented a rapid systematic review at the beginning of the pandemic. Results showed that the most frequent strategies and resources used by health workers were social/family support, lifestyle adjustments, mindfulness, or distraction. A minority of professionals asked psychological assistance (Muller et al., 2020). The design of mental health resources and interventions for healthcare professionals has become an urgency. This population needs easy access to psychological programs adapted to their characteristics to deal with psychological problems and the emotional burden related with the workplace, especially during health crisis (Mira et al., 2020). The main aim of this systematic review is to perform an update of the psychological interventions designed for healthcare professionals and delivered during pandemic and analyzed their effectiveness in reducing the psychological impact experienced by the participants.

CHALLENGE:

As per Boniol, M., McIsaac, M., Xu, L., Wuliji, T., Diallo, K., & Campbell, J. (2019). Gender equity in the health workforce: Analysis of 104 countries. (No. WHO/HIS/HWF/Gender/WP1/2019.1). World Health Organization. The Population, Intervention, Comparator and Outcome framework was used to report the eligibility criteria of this systematic review (O'Connor et al., 2008). Population. Healthcare professionals who worked during the COVID-19 pandemic. Intervention. Psychological interventions, provided from de workplace, addressed to reduce the psychological impact of healthcare professionals who worked during the COVID-19 pandemic. Comparator: Any comparator, including pharmacological treatment, control group or no treatment group. Outcome. Validated questionnaires used to measure pre- and post-intervention comparisons in any variable related with mental health. **Studies. Randomized Controlled Trials (RCT).**

Information sources: The search was conducted using the electronic databases: Web of Science, Scopus, Cochrane Central Register of Controlled Trials (CENTRAL) and PubMed. The search was closed on 28 January 2022. An updated of the search was conducted on 12 September 2022.

Search strategy: The search presented some limitations: the study design had to be RCT, the language had to be English or Spanish, and years 2020 onwards. The combination of keywords used to conduct the search was as mentioned below:

SELECTION PROCESS:

A total of 254 studies were identified from the different databases. These studies were imported into Rayyan, a research tool designed to work with systematic reviews. After automatically removing duplicates with Rayyan, 157 studies by title and abstract were screened by two independent reviewers, based on eligibility criteria. The remaining articles were full text assessed by the same independent reviewers. Finally, to resolve disparities between the two reviewers the chosen method was discussion. During the search update, 151 new studies were identified between 28 January and 12 September 2022. A total of 67 duplicates were identified and removed, the remaining 87 studies were screened by title and abstract. Finally, only four were full text assessed and three met the inclusion criteria. The entire process was conducted by the same independent reviewers responsible of the initial search.

Data Collection Process:

Two independent reviewers collected data from the included studies. The information extracted was: (i) study characteristics: authorship, year and country; (ii) sample characteristics: sample size, gender, age, occupation; (iii) characteristics of the interventions and comparators: type of psychological intervention, sample size of each intervention arm, length of the intervention; (iv) outcome characteristics: questionnaires used to measure the variables of interest, pre- and post-intervention difference in variables of interest.

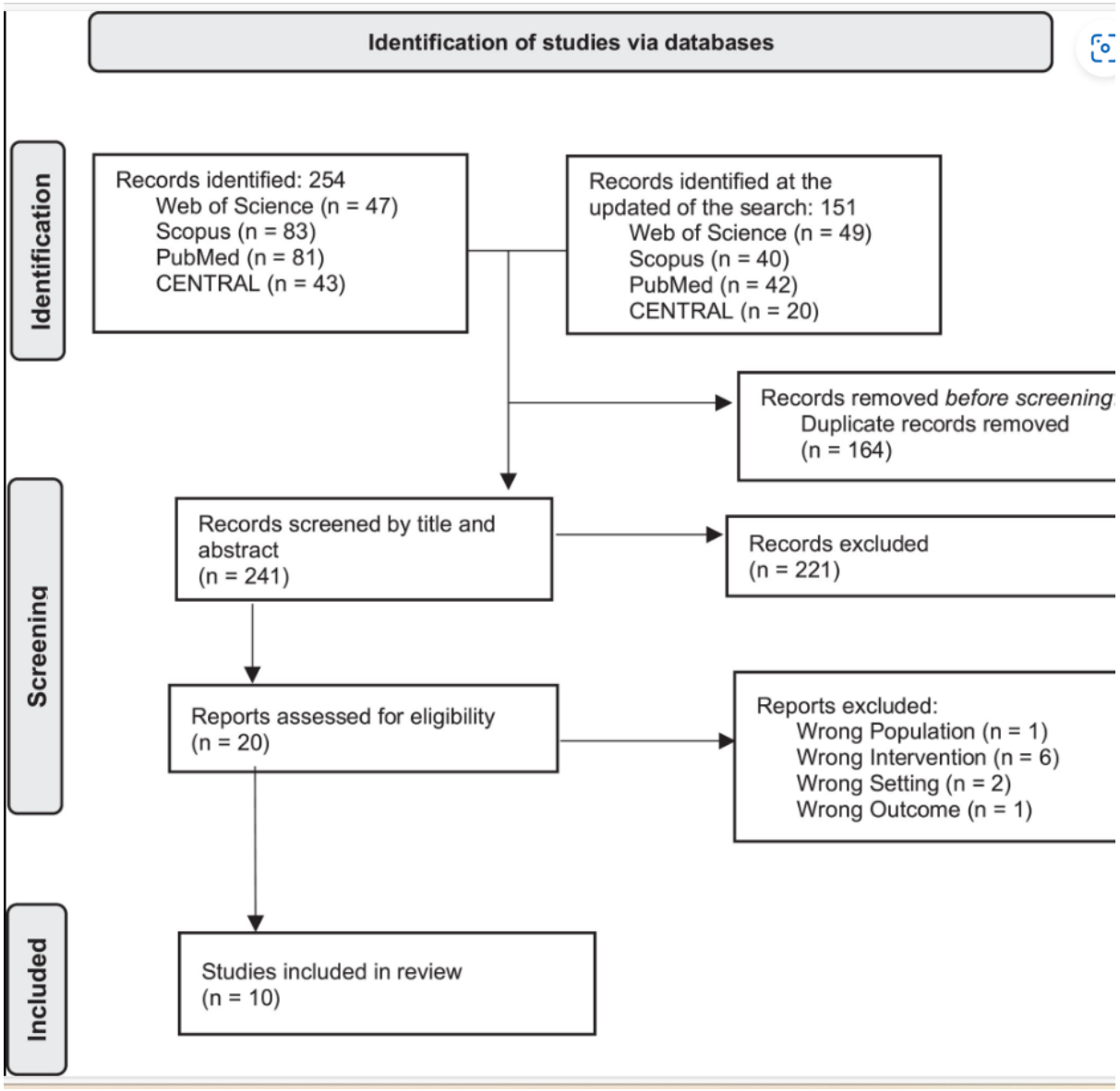
Study Risk of Bias Assessment:

To ensure the methodological quality of the study, two independent reviewers assessed the included studies according to the criteria of Cochrane Collaboration Handbook (Higgins & Altman, 2008). This tool contained the following domains to assess sequence allocation, blinding of the participants and personnel, blinding of outcome assessment, incomplete outcome data, selective outcome reporting and other sources of bias. Each domain could be assessed for high, low or unclear risk of bias (Higgins & Altman, 2008).

RESULTS:

The number of identified studies between the initial search and the update was 405. After removing duplicates and the first screening of title and abstract by two independent reviewers, 20 full-text studies were screened. Finally, 10 articles, 7 at the initial search and 3 at the update, met the pre-specified inclusion criteria and were included in the review

Below figure - Open in figure -Flow diagram of study selection.



Description of Included Studies:

The main characteristics of included studies are summarized in Table 1. Six articles were published in 2021 and four in 2022. Studies were carried out in Spain (*n* = 2), Italy (*n* = 1), India (*n* = 1), Iran (*n* = 2), United States (*n* = 1) United Kingdom (*n* = 1), Turkey (*n* = 1) and Canada (*n* = 1). The total number of participants was 2099. In two studies women represented the 100% of the sample, in five studies represented more of the 50%, in two studies this percentage was below 50% and one did not specify the number of women or men neither the age. Studies did not present the associations between gender and job roles. Following the inclusion criteria, the entire sample worked as healthcare professionals during COVID-19 pandemic. All studies presented at least one psychological intervention arm, 11 intervention arms and 10 control arms

were identified. Interventions were delivered using new technologies (phone, web applications or video), except three. One of them used ordinary mail to send the materials (Procaccia et al., 2021). The other two administrated their interventions in person (Ferreres et al., 2022; Yildirim & Yildiz, 2022). The length of interventions ranged between 1 day and 8 weeks, only 3 studies reported follow-up data (Amsalem et al., 2022; Ferreres et al., 2022; Fiol-DeRoque et al., 2021).

DISCUSSION:

This is the first systematic review about the effectiveness of psychological interventions for healthcare professionals during COVID-19 pandemic. Previous studies were conducted to identify the psychological resources available for this population (Hooper et al., 2022) or/and patients with COVID-19 (Legakul et al., 2022; Tasleem et al., 2022). However, the vulnerability of healthcare professionals to health crisis (García-Iglesias et al., 2020; Nguyen et al., 2020; Vieta et al., 2020), the observed psychological impact (Shultz et al., 2016; Yang et al., 2020) and the lack of resources (Muller et al., 2020; Smallwood et al., 2021) revealed the urgency of designing psychological interventions adapted to the needs of health workers. The number of women was superior in most of the included studies. There was no evidence for the relation between gender and job roles, except for the two studies where the entire sample was composed by women nurses. However, it has been observed that women represent 70% of workers in social and health sector. Especially, there was observed more female presence between nurses than other roles (Boniol et al., 2019). Nurses participated in six of the included studies. In previous studies, nursing was the occupation with the highest levels of psychological problems, like anxiety or depression, due to the close contact with patients for long working hours (Boniol et al., 2019; Danet, 2021; Shaukat et al., 2020). Ten studies accomplished the inclusion criteria of this review. The main assessed variables were depression, anxiety, stress, and PTSD because they were identified as the most prevalent between healthcare workers (Lazzerini & Putoto, 2020; Li et al., 2020; Vieta et al., 2020). Work-related stress was also analyzed because burnout was a relevant variable during the pandemic (Yildirim & Yildiz, 2022). Most of the interventions were delivered using new technologies because of the safety regulations imposed due to COVID-19. Ehealth interventions, defined as the combination of electronic communication and new technologies in the health area, showed positive results according to previous studies (Oosterveen et al., 2017). Presenting advantages like less cost, more flexibility, anonymity and reaching more people at the same time (Beleigoli

et al., 2019). However, two of the included studies did not show significant differences between groups. The proposed interventions were psychoeducational web applications (Fiol-DeRoque et al., 2021) and tele-counselling by phone (Gupta et al., 2021). The length of the interventions could be another aspect to consider being 14 and 7 days respectively (Fiol-DeRoque et al., 2021; Gupta et al., 2021). In these two studies, the interaction with a mental health professional was not enough, considering the severity of the situation. In fact, Fiol-DeRoque et al. (2021) observed that the intervention group showed significant differences compared to control group, when the applications was combined with an additional method like psychotherapy or psychotropics. Therefore, these proposals (Fiol-DeRoque et al., 2021; Gupta et al., 2021) could be considered additional resources more than psychological interventions by themselves. Fiol-DeRoque et al. (2021) found same results for the secondary outcomes, insomnia, and self-efficacy. Moreover, there was no significant differences for any variable at 2 weeks follow-up. These results revealed that interventions should be more personalized, supported by a mental health professional and maintained over time to prove their effectiveness (Sherrington et al., 2016). However, Gnanapragasam et al. (2022) used an application not only to reduce psychiatric morbidity symptoms, also to increase well-being between health workers obtaining positive results for the intervention group compared to control group. Yildirim and Yildiz (2022), used mindfulness and music therapy, instead of new technologies, to reduce work-related stress but also to increase psychological well-being, obtaining positive results for the intervention group. Currently, the definition of health implies a state of complete physical, mental and social well-being, and not just the absence of disease (WHO, 2022). Programs that promote wellness at the workplace, instead of removing symptoms, could be more beneficial both individuals and organizations by optimizing the functioning of health care systems in the long term (Shanafelt et al., 2019). As per Gnanapragasam, S. N., Tinch-Taylor, R., Scott, H. R., Hegarty, S., Souliou, E., Bhundia, R., Lamb, D., Weston, D., Greenberg, N., Madan, I., Stevelink, S., Raine, R., Carter, B., & Wessely, Another study used tele-counselling during 7 days for the intervention groups and obtained significantly lower scores for anxiety related to COVID-19 and likelihood to illness compared to non-intervention group (Ghazanfarpour et al., 2021). The main difference with Gupta et al. (2021) was the control group, without intervention and basic information respectively (Ghazanfarpour et al., 2021; Gupta et al., 2021). The evolution of the pandemic and the arrival of a new

normality could influence these results. Previous studies found that the impact of pandemic was maintained over time, even increasing levels of anxiety and depression (González-Sanguino, et al., 2020). For these reasons, ensuring the psychological well-being of health workers has become a sanitary priority, as well as, implementing organizational measures to protect the mental health of healthcare workforce (Mira et al., 2020; Søvold et al., 2021). Proposing policy suggestions could be a useful tool to achieve long-term effectiveness results in this field (Søvold et al., 2021). Additionally, teaching self-care strategies, like emotional skills training (Ferreres et al., 2022), provides long-term tools to face stressful situations during the lifespan. If psychiatric symptoms reappear, the individual will be able to manage the situation (Søvold et al., 2021). Otared et al. (2021) delivered a group-based online ACT. The results showed significantly lower scores in ACT group compared to wait list for anxiety and depression. Moreover, participants in the intervention group reported significantly higher scores for quality of life and acceptance and act skills compared to wait list. Supporting the relevance of promoting well-being, rather than treating the symptoms, to achieve long-term individual and organizational results (Shanafelt et al., 2019; Søvold et al., 2021). The multi-protocol ACT was elaborated from the information provided by Hayes et al. (2012). According to previous studies, this intervention was guided by mental health professionals, providing instructions with frequent and personalized feedback (Sherrington et al., 2016). This intervention presented the advantage of the group format. Group therapy provided a space to share common fears, provide solutions, show empathy and not feel alone. Besides, participants provided feedback to each other, strengthening group cohesion. Especially relevant in crisis like COVID-19 outbreak (Rodríguez-Zafra & García-Galeán, 2022). Moench and Billsten (2021) used another complete programme, teaching different techniques to cope with difficult situations related to pandemic. Significantly lower scores were observed for intervention group compared to wait list. The intervention group also showed a significant increase of self-efficacy compared to wait list. The presence of self-regulation skills and active coping strategies, such as problem solving, were associated with better mental health (Teixeira et al., 2015). Promoting these skills from the workplace will result in fulfiled workers, therefore more effectiveness, better system functioning and less organizational costs (Shanafelt et al., 2019; Søvold et al., 2021). Amsalem et al. (2022) used video to encourage participants to seek psychological treatment. The 80% of the participants presented depression,

anxiety, or PTSD. Intervention groups scored significantly higher on treatment-seeking intentions than the non-intervention group. These results were replicated in the 14- and 30-day follow-up. However, like in previous studies (Fiol-DeRoque et al., 2021; Ghazanfarpour et al., 2021; Gupta et al., 2021) these videos were complementary resources. In fact, this proposal was a programme to seek comprehensive psychological intervention, proving that mental health is a priority for this population. Procaccia et al. (2021) proposed an intervention delivered without new technologies. Expressive writing group obtained significantly lower scores for PTSD and depression than neutral writing. These results supported that focusing on deeper feelings and thoughts, rather than avoiding them, reduces the psychological impact of COVID-19 pandemic (Teixeira et al., 2015). Therefore, psychological interventions are needed to learn to handle the emotions resulting from working in limit situations (Shanafelt et al., 2019). Finally, most of the proposed interventions lasted between 3 and 14 days, were self-manage or with minimal contact with the mental health professional and were based on psychoeducation. These programs were not comprehensive enough to be considered effective psychological interventions, the results were promising but more research is needed. Especially, longitudinal studies to ensure long-term effects and demonstrate that mental health programs could be a beneficial organization investment (Søvold et al., 2021). Some of these programs were oriented to well-being rather than removing symptoms, supporting the WHO concept of health to achieve long-term effectiveness results (Ferreres et al., 2022; Gnanapragasam et al., 2022; Moench & Billsten, 2021; Otared et al., 2021; Yildirim & Yildiz, 2022). As per Carmassi, C., Foghi, C., Dell'Oste, V., Cordone, A., Bertelloni, C. A., Bui, E., & Dell'Osso, L. (2020). PTSD symptoms in healthcare workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic. Psychiatry Research, 292, 113312. The health international crisis around the world by COVID-19 outbreak has change healthcare system in every country. The results of this review, according with previous studies (Shanafelt et al., 2019; Søvold et al., 2021), reveal the urgency of designing quality psychological interventions for healthcare professionals. The poor working conditions have caused many psychological disorders in this community. Normally, these workers are in close contact with people struggling with difficult situations and the emotional burden is high. COVID-19 pandemic has enhanced these factors, increasing the psychological impact and the precarious conditions (García-Iglesias et al., 2020; Mira et al., 2020;

Nguyen et al., 2020; Vieta et al., 2020). For these reasons, psychological well-being of health workers should be a global priority, as well as, providing comprehensive, high quality and personalized psychological interventions from the workplace and the institutions (Mira et al., 2020; Shanafelt et al., 2019; Søvold et al., 2021). In fact, psychological programs could increase the satisfaction with the workplace and, consequently, a better labour performance with less sick leaves (Yslado-Méndez et al., 2019). This psychological approach should be accompanied by an improvement of the labour conditions, reducing marathon days and stabilizing working conditions. As per Danet, A. (2021). Psychological impact f COVID-19 pandemic in Western frontline healthcare professionals. A systematic review. Medicina Clínica, 156(9), 449–458. This systematic review also presents some limitations. The small number of included studies and the time elapsed since the start of COVID-19 pandemic. Besides, all included studies are cross-sectional, longitudinal studies will be necessary to prove the long-term effectiveness of the proposed interventions. In fact, 2 years is a short period of time to performed psychological interventions and prove their effectiveness through RCT. Another limitation was heterogeneity presenting the outcomes through the different included studies. Further investigative research should be driven to supply these limitations. To the best of our knowledge, this is the first systematic review about the effectiveness of psychological interventions for healthcare professionals during COVID-19 pandemic. Previous studies were conducted to identify the psychological resources available for this population (Hooper et al., 2022) or/and patients with COVID-19 (Legakul et al., 2022; Tasleem et al., 2022). However, the vulnerability of healthcare professionals to health crisis (García-Iglesias et al., 2020; Nguyen et al., 2020; Vieta et al., 2020), the observed psychological impact (Shultz et al., 2016; Yang et al., 2020) and the lack of resources (Muller et al., 2020; Smallwood et al., 2021) revealed the urgency of designing psychological interventions adapted to the needs of health workers. The number of women was superior in most of the included studies. There was no evidence for the relation between gender and job roles, except for the two studies where the entire sample was composed by women nurses. However, it has been observed that women represent 70% of workers in social and health sector. Especially, there was observed more female presence between nurses than other roles (Boniol et al., 2019). Nurses participated in six of the included studies. In previous studies, nursing was the occupation with the highest levels of psychological problems, like anxiety or depression, due to the close contact with patients

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Finally, most of the proposed interventions lasted between 3 and 14 days, were self-manage or with minimal contact with the mental health professional and were based on psychoeducation. These programs were not comprehensive enough to be considered effective psychological interventions, the results were promising but more research is needed. Especially, longitudinal studies to ensure long-term effects and demonstrate that mental health programs could be a beneficial organization investment (Søvold et al., 2021). Some of these programs were oriented to well-being rather than removing symptoms, supporting the WHO concept of health to achieve long-term effectiveness results (Ferreres et al., 2022; Gnanapragasam et al., 2022; Moench & Billsten, 2021; Otared et al., 2021; Yildirim & Yildiz, 2022).

CONCLUSION:

The health international crisis around the world by COVID-19 outbreak has change healthcare system in every

country. The results of this review, according with previous studies (Shanafelt et al., 2019; Søvold et al., 2021), reveal the urgency of designing quality psychological interventions for healthcare professionals. The poor working conditions have caused many psychological disorders in this community. Normally, these workers are in close contact with people struggling with difficult situations and the emotional burden is high. COVID-19 pandemic has enhanced these factors, increasing the psychological impact and the precarious conditions (García-Iglesias et al., 2020; Mira et al., 2020; Nguyen et al., 2020; Vieta et al., 2020). For these reasons, psychological well-being of health workers should be a global priority, as well as, providing comprehensive, high quality and personalized psychological interventions from the workplace and the institutions (Mira et al., 2020; Shanafelt et al., 2019; Søvold et al., 2021). In fact, psychological programs could increase the satisfaction with the workplace and, consequently, a better labour performance with less sick leaves (Yslado-Méndez et al., 2019). This psychological approach should be accompanied by an improvement of the labour conditions, reducing marathon days and stabilizing working conditions. This systematic review also presents some limitations. The small number of included studies and the time elapsed since the start of COVID-19 pandemic. Besides, all included studies are cross-sectional, longitudinal studies will be necessary to prove the long-term effectiveness of the proposed interventions. In fact, 2 years is a short period of time to performed psychological interventions and prove their effectiveness through RCT. Another limitation was heterogeneity presenting the outcomes through the different included studies. Further investigative research should be driven to supply these limitations.

REFERENCES:

1. Amsalem, D., Lazarov, A., Markowitz, J. C., Smith, T. E., Dixon, L. B., & Neira, Y. (2022). Torales et al., 2020,Bao et al., 2020; Brooks et al., 2020; Rajkumar, 2020,Salari et al., 2020,Rodgers et al., 2021,García-Iglesias et al., 2020; Vieta et al., 2020,Shultz et al., 2016; Yang et al., 2020,Wallace et al., 2020,Smallwood et al., 2021,Hall et al., 2016,Muller et al., 2020,Procaccia et al., 2021,Ferreres et al., 2022; Yildirim & Yildiz, 2022,Amsalem et al., 2022; Ferreres et al., 2022; Fiol-DeRoque et al., 2021Video intervention to increase treatment-seeking by healthcare workers during the COVID-19 pandemic: Randomised controlled trial. The British Journal of Psychiatry, 220(1), 14–20.
2. Boniol, M., McIsaac, M., Xu, L., Wuliji, T., Diallo, K., & Campbell,

J. (2019). Gender equity in the health workforce: Analysis of 104 countries. (No. WHO/HIS/HWF/Gender/WP1/2019.1). World Health Organization.

3. Carmassi, C., Foghi, C., Dell'Oste, V., Cordone, A., Bertelloni, C. A., Bui, E., & Dell'Osso, L. (2020). PTSD symptoms in healthcare workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic. Psychiatry Research, 292, 113312.
4. Moench and Billsten (2021, Teixeira et al., 2015,Shanafelt et al., 2019; Søvold et al., 2021,Fiol-DeRoque et al., 2021; Ghazanfarpour et al., 2021; Gupta et al., 2021,Shanafelt et al., 2019Danet, A. (2021). Psychological impact f COVID-19 pandemic in Western frontline healthcare professionals. A systematic review. Medicina Clínica, 156(9), 449–458.
5. Gnanapragasam, S. N., Tinch-Taylor, R., Scott, H. R., Hegarty, S., Souliou, E., Bhundia, R., Lamb, D., Weston, D., Greenberg, N., Madan, I., Stevelink, S., Raine, R., Carter, B., & Wessely,
6. S. (2022). Multicentre, England-wide randomised controlled trial of the 'Foundations' smartphone application in improving mental health and well-being in a healthcare worker population. The British Journal of Psychiatry, 222(2), 58–66.