Abstract

Purpose of Review We aim to review evidence of the psychological impact of the COVID-19 pandemic on healthcare professionals and the effects of the psychological crisis interventions and measures implemented to manage stress.

Recent Findings Mental health problems are frequently encountered in health professionals during emergencies and often prevail over the following years. Results show health professionals exhibited symptoms of depression, anxiety, emotional distress, burnout, post-traumatic stress and poor sleep quality. In response to acute responses to stress, it is crucial to provide psychoeducation, mindfulness and coping resources. These interventions can improve resilience and self-efficacy of professionals, as well as help to prevent anxiety, depression and quality of sleep.

Summary The need for intervention programmes targeting the mental health of vulnerable populations has been widely acknowledged. We described a psychological support plan designed and implemented with the aim of providing mental health care for health professionals. Such programmes should be easily accessible to professionals, preferably in their own work environments.

Keywords COVID-19 · Healthcare workers · Psychological impact · Trauma · Psychological intervention

Introduction

The COVID-19 pandemic has put the world in a state of global health and social crisis. Clinical presentations of SARS-CoV-2 infection range from asymptomatic states to severe complex conditions that can be fatal, with more than one million lives lost so far [1]. It has become a major threat to the general population, and it has forced society to take drastic measures in an attempt to halt its spread. These include changes in lifestyle, social distancing and loss of routines. This unprecedented situation has brought to modern societies an enormous emotional distress with significant impact on quality of life.

In Spain, where the national health system (NHS) is public and accessible to all citizens, the COVID-19 pandemic has forced a reorganisation of the entire social and health system [2]. The healthcare organisational structure of hospitals was quickly compromised and needed to be continuously remodelled as the pandemic progressed. It was necessary to send professionals to reinforce units that were overloaded. Decisions had to be made under great social and health care pressure. The situation that arose caused a great deal of uncertainty and insecurity not only in the general population, but also among health care professionals. They had to face an unknown disease with an unpredictable course.

The psychological effects of the COVID-19 pandemic in the general population have been described in a similar way by several authors from different countries, coinciding with its traumatic nature [3–12]. This pandemic can be considered as a
severe stressor for anyone as it is out of the usual range of human experience, represents a major threat to life, and causes intense fear and helplessness. It is well known that under such conditions, an adaptive response is set in motion to facilitate coping and activate resilience processes [13•, 14••, 15]. However, it can also give rise to symptoms or disorders that make successful coping difficult [16]. The need for intervention programmes targeting the mental health of vulnerable populations, including health professionals, has been widely recognised ([17, 18, 19•, 20–22]).

**Psychological Impact of the Pandemic in Health Care Workers**

During the severe acute respiratory syndrome (SARS) pandemic in 2002–2004, healthcare workers showed high levels of distress and PTSD symptoms [23]. A similar study conducted 3 years after the SARS outbreak confirmed that the greater the direct contact, the greater the risk of presenting PTSD symptoms, and the more likely that these symptoms would persist over time [24]. Mental health problems are frequently encountered in health professionals during emergencies and often prevail over the following years [25••, 26, 27••]. Estimates obtained through meta-analysis indicate the presence of mainly anxiety (45%), depression (38%), acute stress (31%), burnout (29%) and post-traumatic stress (19%) [28]. In this meta-analysis, there were no significant differences in the mentioned symptoms between the emergency phase and the subsequent follow-up, suggesting that there is a risk of long-term symptomatic persistence. A meta-analysis of 59 articles on the psychological effects of pandemics on non-infected healthcare professionals showed higher levels of emotional distress and post-traumatic stress in professionals that were at higher risk of exposure [29••].

During the COVID-19 pandemic, professionals exposed to risk of infection have shown higher levels of anxiety and stress, compared to those without direct contact [30–32]. Sleep disturbances and depressive symptoms [33] and fear of transmitting the virus to family members, friends or colleagues [34] have also been found. A meta-analysis of publications from the first 8 months of the COVID-19 pandemic found higher prevalence rates of anxiety (34.4%), depression (31.8%) and post-traumatic symptoms (11.4%) than in the meta-analyses reported in previous months [35]. In order to explain this increase, they point to uncertainty about the progression of the pandemic, doubts regarding the feasibility of a vaccine, increased workload, lack of social support and intense fear of infecting family members. They also point to a significantly greater psychological impact on frontline professionals compared to second-line workers.

Stress, anxiety, depression, post-traumatic stress and insomnia have been observed in Spanish health professionals [36, 37]. Prevalence rates show 56.6% of post-traumatic stress, 58.6% of anxiety disorder, 46% of depressive disorder and 41.1% of feeling emotionally drained [38]. Prevalence of mental disorders among workers with a history of psychiatric problems was 61%, compared to 34% among those with no previous mental disorders [39]. The persistence of symptoms several months after the start of the pandemic has been commonly observed [36].

The following risk factors for psychiatric symptoms related to the stress of the pandemic have been identified in health professionals: being female, being younger, lack of social support, experiencing social rejection, stigmatisation, being a nurse, having less work experience, not having received specialised training for this type of situation and carrying out frontline care tasks [35, 38, 40, 41, 42]. Additional risk factors that have been identified are having dependent children, an infected family member, lack of support, stigma or discrimination and having maintained a prolonged quarantine [29••]. Access to personal protection, clear communication, emotional support and rest have been associated with lower mental health morbidity [29••, 43].

The high incidence of anxiety and stress observed in health professionals justifies the need to develop psychological intervention teams to address this symptomatology and to manage its psychological impact [44]. Addressing this emotional overload in its initial moments has been shown to be important in preventing acute stress or burnout in the short term [45], and the appearance of adaptive disorders, anxiety disorders, affective disorders, post-traumatic stress, substance abuse or suicide risk in the medium term [5, 46, 47•]. Regarding the perceived need for psychological or psychiatric help by healthcare professionals in the early stages of the COVID crisis, in one study on Spanish population, 43% considered that they might need it in the future [48]. However, psychological needs are often not taken into account despite the evidence that calls for such attention to this issue [49].

Mental health units of most hospitals restructured their activity in order to provide support for health professionals involved in the fight against the pandemic [3, 45, 50, 51, 52•, 53]. Developing programmes in coordination with all of the health units involved, both primary and specialised care, has been pointed out as key to achieving optimum care [54]. Individual psychological support aimed at those professionals who are most at risk has been shown necessary to minimise the impact of future similar health crises. In addition to this, the role of team leaders in providing a supportive environment in the workplace is crucial [40, 55, 56].

There is limited evidence regarding psychological interventions in viral pandemics. However, the available data suggest that the interventions based on psychoeducation, training in coping skills, organisational change and training of health professionals could improve resilience and self-efficacy of professionals, as well as help to prevent anxiety, depression
and sleep problems [57]. Mindfulness-based interventions have been found to be effective in reducing anxiety and stress in healthcare workers [58–61].

It is important that interventions are brief and accessible to facilitate their implementation during the working day. In this line, intervention programmes aimed at health professionals, based on brief techniques from different empirically validated therapeutic approaches, have been published [62]. It is useful to complement these interventions with therapeutic material such as infographics or audios to distribute them among professionals. To this end, some of the published programmes have taken advantage of the support of new technologies to facilitate access to these therapeutic contents [60, 63, 64].

Another relevant point is to coordinate with team leaders and provide them with emotional and technical support when required. Leaders’ supportive skills in managing emotional states of the team have been pointed out as relevant [49, 65]. Along the same lines, the importance of team leaders in the transmission of supportive messages and the establishment of daily communication to enhance self-efficacy and a sense of control and security have been highlighted [29••]. Such responses should seek to generate a safe environment and alleviate the emotional overload that has arisen among professionals.

Emphasis has been placed on the importance of providing teams with safety measures, facilitating access to regulated rest times and providing mental health support services [66]. It is beneficial to ensure stability and continuity of teams by encouraging peer support and interactions [65].

The psychological support of health professionals should not be short-lived or “in waves” as the pandemic itself, but should be maintained once the crisis is over [67, 68, 69••].

**Healthcare Professional Assistance Plan During COVID-19 at the Fundación Jiménez Díaz University Hospital**

From the first weeks of the COVID-19 pandemic, our mental health unit at the Fundación Jiménez Díaz University Hospital received numerous requests for psychological support from other healthcare units. The necessary reorganisation of teams and resources required professionals to adapt to new work teams and new care routines in a short period of time. The teams were experiencing a big emotional burden, seeing so many people suffering and dying isolated from their families in such a catastrophic global situation. Isolation of patients meant a barrier to communication and physical contact with them, which, together with the enormous work overload, made providing them with emotional support greatly difficult. Family members were living the complementary emotional suffering, being separated from their loved ones. The protective equipment professionals were required to wear was also a stressor as it increased the difficulty and time devoted to regular healthcare tasks. Another major adaptive challenge was observed among professionals working in units where patient deaths were not a common occurrence before the pandemic. High workload, an extension of working hours and reduced resting time led to a feeling of overflow, physical fatigue and cognitive and emotional exhaustion among these professionals. One common fear reported by health workers was related to their own contagion, or being a source of contagion to uninfected family members, colleagues and patients. In addition to all these stress factors, in the early weeks of the pandemic, there was a tendency to postpone “managing personal emotional distress” up until the arrival of a more convenient time when it would not interfere with care “provided to others”.

Considering the care needed to be raised directly by our hospital workers and the requests made by the heads of various teams, the following action plan was implemented. The aim was to provide mental health support for health and non-health professionals of the Fundación Jiménez Díaz University Hospital. Coordination of clinical psychologists from different hospitals in Madrid facilitated the implementation of homogeneous programmes accessible to health professionals.

Priority was given to units with greater overload (pneumology, intensive care units, respiratory intensive care units, emergencies) and professionals more directly involved in the care of COVID-19 patients, with higher exposure times or exposure to more severe patients and frequent deaths.

Care for health professionals at our hospital was designed to meet the following objectives: (a) mobilisation of coping resources, (b) facilitation of individual and group emotional support, (c) prevention and early detection of symptoms and (d) early intervention if symptoms were detected.

Our programme was structured towards several intervention strategies:

- Psychoeducational and preventive intervention through distribution of information and activation of coping resources
- Support to unit heads in managing leadership and team level competencies.
- Face-to-face intervention in these units, mainly at group level, to work on emotional regulation and problem-solving.
- Individual intervention for any professional who may need it, either in person or by telephone.

Psychoeducational support infographics were produced and distributed. The content of the infographics included basic self-care guidelines, aimed at normalising the psychological response to COVID-19, as well as preventing its stigmatisation. Audio recordings containing mindfulness exercises were also made to facilitate their training.
Emotional regulation sessions for team heads and orientation meetings on managing team dynamics were organised to provide support. Materials and revised bibliography addressing specific needs they had expressed were provided to them. Nursing team managers held an essential role in requesting psychological support for their team members after detecting the high stress levels to which they were exposed. Furthermore, their involvement was very active in some of these units in providing emotional and problem-solving support to their team, as well as in listening to their requests and concerns and providing space for mutual support and relief within the unit.

Emotional regulation sessions were aimed at any hospital worker who wished to join. The role of the therapists was very proactive, facilitating as much as possible participation of interested professionals. Participants could join or leave the activity at any time. The aim was to help professionals to become aware of their own needs for a few moments and to facilitate their own self-care skills. The sessions included the following psychological techniques: mindfulness or autogenic training, emotional ventilation and problem-solving.

During the first wave, group sessions were held from March to May 2020. The Mental Health team included 2 clinical psychologists, 2 psychiatrists and 8 residents in psychiatry and clinical psychology who conducted 15-min sessions at the clinical units involved in COVID patients care. The frequency was 2 or 3 days a week in each unit. Due to a greater demand in the intensive care unit and the emergency room, sessions were held there on a daily basis in those units. A total number of 129 sessions were held in the hospitalisation, emergency and intensive care units. The average number of attendees per session was 7, with a total of 928 attendances. Figure 1 shows the progression of attendance at the sessions, higher during the first weeks, progressively decreasing over time, except in the intensive care unit, where attendance remained high throughout the entire period.

Since the start of the second wave in August, group sessions have resumed on a weekly basis in the first-line units. Between August and December 2020, a total of 31 sessions were held with a total of 155 attendances in the intensive care unit and the respiratory intensive care unit. A specialist in clinical psychology led the sessions. The duration of these sessions was longer than in the first wave, lasting approximately 30 min. They usually began with an initial space for emotional ventilation, psychoeducation on common reactions to stressful situations, identification of needs and activation of coping mechanisms. At the end of each session, there was 10 min of mindfulness and sharing.

From March onwards, individual face-to-face and telephone support was provided to professionals who requested it. There were two contact channels: requests for individual attention received during group interventions, and requests received directly through a telephone number and e-mail contact enabled “ad hoc”. An increase in demand was observed during the months of April and May, and then a new increase from September (Table 1). During the months of March through May, psychological interventions were more crisis-oriented, and in the following months, psychotherapy was carried out, oriented towards elaboration of the experience and treatment of anxious, depressive and post-traumatic symptoms.

Figure 1  Attendance at group sessions

Discussion and Recommendations for Action

The year 2020 has seen the most serious pandemic in the last 100 years. This has strained the health system and its professionals, resulting in overburdened health care and a feeling of helplessness among them. A high number of professionals have commonly reported symptoms of acute stress. Feelings of loss of control, uncertainty and fear have led to symptoms of anxiety and depression [4]. These symptoms can sometimes be replaced by functional somatic symptomatic equivalents, which may be related to difficulties in talking about emotional issues [70, 71]. Many health professionals have become directly infected by COVID-19, and thus, fear of infecting their families has been very present for them [72].
Based on our experience, and in line with the published literature, we consider it advisable to implement psychological support programmes that are easily accessible to healthcare professionals [36, 52, 65, 67]. To this end, it is important that these programmes take place preferably in their workplace, offering flexibility in terms of duration and attendance, with no limitations (e.g. joining or leaving at any time), according to the care needs at every moment. Different publications point out the importance of developing programmes that are maintained in the medium or long term, especially if the stressor continues to be active for prolonged periods [25, 26, 27, 28, 69, 73]. Congruent with the above, we have observed that units that have requested maintenance of psychological interventions are those dedicated to frontline work with COVID patients whose activity has been ongoing for months without a break since the beginning of the pandemic about a year ago. This is also consistent with publications that point to direct work with COVID patients as a risk factor [35].

Mental health professionals must play a proactive role during and between sessions, by for example reminding the team every day when the session is scheduled to take place. This can help overcome difficulties in finding a space for emotional self-care and thus, reduce risk of chronification of symptoms. We believe that having this therapeutic space available and accessible can act as a trigger for awareness of the need for self-care in such stressful conditions.

Mindfulness training strengthens mindful attention and self-awareness in the present moment [58]. This has been applied in our therapeutic space to build awareness of one’s own resilience and capacities, facilitating conscious development and increase in self-care. These aspects have been seen as key protective factors against development of symptomatology during crises [74]. In addition, efforts have been made during therapeutic interventions to recover a sense of internal control in those cases in which feelings of helplessness began to appear. A number of publications have pointed out the usefulness of mindfulness training to deal with helplessness and hopelessness in situations of chronic stress [75]. Moreover, a space for reflection and gradual construction of a narrative about everything that has been experienced since the beginning of the pandemic has been worked on. Over time, reflections related to the discovery of one’s own resources and capacities, and the belief that this experience could lead to learning at some point in the future, have emerged in the sessions. These aspects of mindful reflection on traumatic events have been found to be a key factor in the subsequent development of post-traumatic growth in frontline nurses working with COVID patients [76].

During group sessions, perceived value of the emotional support provided by the peer group has also become evident. Mutual understanding and group cohesion has been strengthened over the past months, providing fundamental support. Emotional connection with others has been considered a key aspect of coping with traumatic experiences. Recent publications point to its role as a coping resource and in activating resilience [65, 77]. In our group sessions, we worked to provide a formal space and strengthen the informal support that peers provide on a day-to-day basis. Similarly, we addressed difficulties that arose occasionally regarding issues about differentiating themselves from the group, without feeling that they were betraying the group by making self-care choices that did not necessarily benefit the group.

One of the limitations, especially at the beginning of the programme, concerned the effective dissemination of the programme’s existence. Contact information and psychoeducational material were sent through official channels such as corporate mail. However, for many, this may have gone unnoticed during those first months. An attempt was made to overcome this limitation by also carrying out face-to-face dissemination visits to the units, thus managing to reach most of the nursing, auxiliary and ward teams. Despite the attempts made, healthcare pressure limited access to the medical teams, therefore resulting in a decrease of interest or need to participate at that time.
We are currently considering possibilities for improving dissemination of the support programme for healthcare professionals. To achieve this, the recording of few-minute clips providing basic self-care guidelines aimed at health professionals is underway for later distribution. The content includes similar topics to those covered in the group sessions. Furthermore, relationships with nursing team managers, who act as transmitters of contact information with the mental health team when necessary, have been strengthened.

Another possible limitation concerns the location of the therapeutic setting within the organisation itself. Although for many, this may be an advantage due to accessibility, for others, it may constitute a limitation due to a preference for a therapeutic setting that is distinct from the work environment.

A further limitation we would like to point out is the lack of objective measures as indicators of subjective satisfaction, perceived benefit or level of symptomatology, which prevents us from providing these data. However, persistence over time of requests to resume group sessions and individual interventions have been observed and taken as possible signs of satisfaction. Moreover, adherence and participation in the interventions has remained constant.

**Conclusion**

This review reveals the widespread impact of the health crisis on the mental health of health professionals. There is consensus on the need to design and implement psychological and psychiatric intervention programmes by the pertinent mental health units, and to maintain them in the medium term. There is also consensus on the relevance of the management measures taken by team leaders to alleviate the stressful impact of the crisis and its repercussions on the mental health of their workers.

Future studies on the symptoms that have appeared and their evolution will help design efficient intervention programmes that allow prevention and resolution of the appearance of those symptoms in professionals.

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