

Working on the Frontlines of the COVID-19 Pandemic: A Qualitative Study of Physical Therapists' Experience in Spain

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Abstract

Objective. Knowledge of the experiences of health care professionals who have actively worked on the first line of the COVID-19 pandemic could help in identifying specific professional duties focused on health assistance objectives. No qualitative study has yet been published describing the experience of physical therapists during the COVID-19 pandemic. The purpose of this study was to describe and explore the experiences and perspectives of physical therapists working in public hospitals in Madrid, Spain, during the COVID-19 pandemic.

Methods. A qualitative exploratory study was conducted based on an interpretive framework. Thirty physical therapists working at 11 national public hospitals during the COVID-19 outbreak were recruited by purposeful sampling and snowball techniques. In-depth interviews and researchers' field notes were used to collect data. Interviews were transcribed verbatim. Inductive thematic analysis was used to identify emerging themes.

Results. After identifying 3912 codes and 13 categories, 3 themes emerged. First theme was "Call of Duty," COVID-19 infection dramatically spread, the hospitals were contaminated and overwhelmed, and all floors were converted into COVID-19 wards. Second theme was "Working in War Time." Every day, therapists were given "the war report," receiving their orders, meeting protective personal equipment requirements, and doing a job with fear. Third theme was "When I Arrive at Home." Working during the pandemic had an impact on the therapists' families and the information shared with them.

Conclusions. Physical therapists described the COVID-19 outbreak as an apocalyptic and unexpected war. Comprehensive support is needed for all frontline health care professionals. The COVID-19 outbreak revealed that health care systems were not prepared for a pandemic.

Impact. This is the first qualitative study to be published describing the experience of physical therapists during the COVID-19 pandemic.

Key words: COVID-19; pandemic; physical therapy; health care professional; qualitative

UNCORRECTED MANUSCRIPT

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Introduction

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), known as COVID-19, is a discovered ribonucleic acid coronavirus identified from patients with unexplained pneumonia in Wuhan, China in December 2019.¹ The rapid spread of the disease around the world led the World Health Organization to define COVID-19 as a pandemic on March 11, 2020.² Since then, COVID-19 virus has spread rapidly across the globe in a short period of time with catastrophic proportions.

In Europe, COVID-19 has spread more quickly and dramatically in Mediterranean Countries. Spain has become a European country with one of the highest number of confirmed COVID-19 cases today (1,600,000 cases as of November 2020, and increasing).³ Due to the sudden COVID-19 outbreak, health care professionals, mostly those working in public health care systems, have experienced a fast and dramatic change of their work for battling against the epidemic and to care for patients affected by COVID-19 infection. The value of health care professionals in this worldwide crisis has clearly been emphasized;^{4,5} hence awareness of what health care professionals have experienced during the COVID-19 outbreak is crucial for identifying those situations where changes to defend against a potential second wave could be improved.

Understandably, most COVID-19 literature has concentrated on the disease itself and on its management of the acute cases, that is, in saving lives. Literature describing the experience of health care professionals involved in COVID-19 outbreak is lacking. Liu et al explored the experience of nine nurses and four physicians during the pandemic and observed a predominance responsibility and resilience emotions due to working on COVID-19 wards.⁶ Sun et al analyzed the psychological experience of twenty nurses

providing care for patients with COVID-19 and described an evolution from negative to more positive emotions during the pandemic.⁷ Both studies were conducted in China, at the beginning of the outbreak, and were specific to nursing.

It is important to note that all health care professionals, such as emergency clinicians, physicians, surgeons, internists, nurses, physical therapists, have been actively involved in this pandemic. The experience of each professional is personal and different from each other. As Xiong and Peng⁸ have reported that "...understanding frontline health-care providers' experiences, developing targeted intervention strategies, and establishing long-term mechanisms for psychological crisis prevention are necessary, not only for protecting the physical and mental health of health-care providers, but also for better protecting patients and controlling the spread of the pandemic."^{8(p 740)}

In this scenario, qualitative research including personal narratives could provide a general holistic picture of COVID-19 outbreak that may be more meaningful to health care administrators. Knowing the experiences of different health care professionals who have actively worked on the COVID-19 pandemic is relevant since different professionals have simultaneously fought against COVID-19; however, varying duties and experiences. Jette et al⁹ in their editorial regarding the value of Qualitative research in Physical Therapy reported how qualitative approach could help to explore "...beliefs, attitudes, and behaviors that can generate a deeper understanding of the impairments, functional limitations, and disability."^{9(p 820)} No qualitative study has been published yet describing the experience of physical therapists during the COVID-19 pandemic. Therefore, the objective of this study was to explore the perspectives to understand and describe the experiences of physical therapists working in national public health care hospitals in Madrid, Spain, one of the areas most impacted by the COVID-19 pandemic in Europe.

Methods

Design

A qualitative exploratory study was conducted based on an interpretive framework¹⁰ following the Standards for Reporting Qualitative Research (SRQR)¹¹ and Consolidated Criteria for Reporting Qualitative Research¹² (<https://www.equator-network.org/>). The aim of an explorative descriptive qualitative study is to identify an event or a critical situation. It seeks to describe "what is happening" and "how it is happening".¹³ Qualitative exploratory studies aim to be a comprehensive summary of events in the everyday terms of the described event. This design is the method of choice when straight descriptions of phenomena are desired.^{14,15} On the other hand, from the interpretive perspective, human action is meaningful and the goal of inquiry is to find out how people respond to and understand the meaning of social phenomena.^{16,17} The current study was approved by the local ethical committee of Universidad Rey Juan Carlos (URJC 1905202011920). Participants provided oral informed consent prior to their inclusion. Five researchers, including 4 physical therapists (C.F.dIP., M.P.C., A.I.dILR., L.L.F.) and 1 nurse (D.P.C.) participated in this study. All hold PhDs in health sciences, are university professors, and were not involved in clinical activity. One member of the research team (C.F.dIP.) knew the first 12 physical therapists, who were recruited from collaborating and teaching undergraduate students from the same university.

Participant Recruitment

Participants were recruited through purposeful and snowball sampling techniques.¹⁸ All participants were contacted via email by one of the authors (C.F.dIP.). Thirty physical therapists, aged from 18 to 65 years old, working in rehabilitation/physical therapy services at public hospitals in Madrid during the COVID-19 pandemic (mid-

March to May 2020) were recruited between May 30 and June 30, 2020. The city of Madrid (population = 6.6 million) has become one of the European areas most affected by COVID-19 (306,000 COVID-19 cases).

Twelve physical therapists working at 3 public health hospitals of the southwest area of Madrid who provided direct care for patients with COVID-19 during the pandemic were eligible. The remaining 18 therapists were recruited by snowball sampling from other 8 public health hospitals located at different areas of Madrid (northwest, northeast, southeast, and city center). Both sampling techniques help to expand the sample size and to improve the diversity of participants. In the current study, the sample size was determined following the Turner-Bowker et al proposal.¹⁹ These authors reported that 99.3% of concepts, themes, and contents emerged with around 30 interviews.¹⁹ With this proposal, a greater capacity to identify codes, categories, and topics is achieved. In addition, the current proposal also helps researchers to know when to stop collecting data and recruiting participants.

Data Collection

Semistructured individual, in-depth interviews including open-ended questions were used to get information regarding the issues of interest.^{10,18} After collecting professional and personal data from each participant, the broad opening question was: “Please, can you share with me your personal experience during the COVID-19 pandemic?” Open-ended follow-up questions were used to obtain detailed descriptions (**Supplementary Appendix 1**). Additionally, “Please tell me more about that”, was also used to enhance the depth of the discussion of a specific topic.

Due to lockdown requirements established by the Spanish Government on March 14, 2020,²⁰ all personal interviews were conducted in a private video chat room using the videoconference platform Zoom (www.zoom.us, San Diego, CA, USA).²¹ Each

participant received a private and personalized email with an invitation. All interviews were conducted by 2 authors (D.P.C. and C.F.dIP.).

With participant oral permission, all interviews were audiorecorded and videorecorded to get access to nonverbal cues such as eye contact, facial expressions or body motions, unique data resources for qualitative studies. Additionally, field notes during the semistructured interviews were also collected by the researchers because they provide a rich source of information as participants describe their personal experiences and their behaviors during data collection. Researchers also noted their reflections concerning methodological aspects of the data collection.¹⁶ Videorecording allowed the researchers to collect as much nonverbal information as possible, which could enrich the descriptions of health care providers' experiences.

Confidentiality was assured by consecutively numbering each interview and removing identifying information from the transcripts. All audio recordings and transcripts were saved on a password-protected computer with restricted access only by the researchers. Pseudonyms were used to report the results to keep confidentiality.

Data Analysis

All interviews were transcribed verbatim by 3 authors (M.P.C., A.I.dLL.R., and L.L.F.), recording a total of 1434 minutes of interviews overall (mean = 47.8 [SD =12.8] minutes each).¹⁷ In addition, 2 authors (D.P.C., C.F.dIP.) reviewed and analyzed each transcription with audio-video recording. A thematic, inductive analysis was performed.^{17,22} Thematic analysis consisted of a codification process from participants' narratives. See example of codification process in **Figure 1**. The participants' narratives were reviewed to identify codes and then a codebook was created. This process of thematic analysis was conducted separately for each interview by 2 researchers. Later, the results of the analysis were combined during team meetings, in which the

researchers met to discuss the analysis procedures.¹⁶ In case of differences, the final themes were identified by consensus. No qualitative software was used.

Rigor and trustworthiness

We used criteria by Guba and Lincoln^{16,17} for establishing trustworthiness of the data by reviewing issues concerning data credibility, transferability, dependability, and confirmability. **Table 1** summarizes the procedures used to enhance trustworthiness and credibility.²³

Results

Our sample consisted of 30 physical therapists (19 women and 11 men), with a mean age of 41 years (SD = 6 y) and a mean of 20 years of professional experience (SD = 7). All participants have actively worked with patients with COVID-19 within the hospitals in which they were employed during the crisis from mid-March to end of May 2020.

Three main themes were identified: (1) call of duty, (2) working in war time, and (3) when I arrive at home (**Fig. 2**). Participants' narratives, extracted directly from interviews, described each identified theme.¹⁶ A detailed summary of the themes, categories, and narratives is shown in **Supplementary Appendix 2**.

Call of Duty

The first theme describes how COVID-19 spread through hospitals, the first professional responses, and the professionals' experience of the pandemic. The participants described that the arrival of the pandemic was abrupt and that infections dramatically increased daily, without clear information about the use of facemasks by health care professionals. Participants discussed that emergency departments and intensive care units (ICUs) were overflowing due to a huge increase number of patients, and that hospitals ran out of protective materials and quickly collapsed. Participants

commented that no hospital was prepared for the magnitude of the contagion: “The contagion of the hospital was crazy. Nobody expected this magnitude. It was safer to be in a high-risk area because you ha[d] personal protective equipment” (Patricia).

Participants described how the spread of the virus in patients and professionals in non-COVID units was very fast and reached all hospital services quickly: “The infection was as widespread, big, that we assumed all hospitalized patients [had] infection by COVID-19” (Vicente). Hospitals were contaminated and overwhelmed, and all hospital floors were converted into COVID-19 wards. In addition, all scheduled surgeries and medical consultations were cancelled, and all rehabilitation services were closed and converted into COVID-19 wards: “One day, we had 200 patients waiting at the emergency room. All rehabilitation services were converted into 2 days for hospitalization as COVID-19 wards.” (Daniela). Participants commented that only medical emergencies were attended.

According to the participants, they stepped forward, answered the call from their hospitals, and showed total predisposition to help at any place and “do anything” (eg, sterilization, pharmacy, and preventive services). Participants discussed that they felt their call of duty as health care professionals: “The rehabilitation service was closed, but this situation did not mean that I could not contribute. I am a physiotherapist, but also a health professional, my work is centered in the person who needs help... and during the pandemic a lot of help was needed” (Elisa). Participants reported how they presented as volunteers to substitute for colleagues who had potential risk factors for COVID-19: “Once I have passed the infection, I have antibodies, and, therefore, it was my responsibility to prevent other colleagues exposing themselves to that risk” (Vicente).

All participants perceived that they were working on the first line of the war against COVID-19, as they were asked to work in emergency departments and ICUs and with

the hospitalized population: "The emergency room and the ICU, it was like being on the front line, on the front of a war, fighting against an invisible enemy, we were the first facing against the COVID-19, the most exposed" (Sofia). This change was perceived as war exposure because of the risk of contagion from exposure: "The first line of battle was the worst. You were continuously exposed, closed spaces fully covered with patients with COVID-19, where invasive techniques were conducted, there were aerosols, vomits" (Elisa). Participants defined their work as making a "medicine of war for surviv[al]," where care seeks to prolong the life of the patient if possible, without any available scientific data.

Participants described this situation as being inside "a war movie": chaos, patients collapsing in the emergency departments while they waited on the corridor floor, families asking desperately for their loved ones without information, regular surgery (operating) rooms and rehabilitation services converted into ICUs, the delays in the removal of the dead. There was no time to plan any action, it was only "act": "I went to see my first patient with COVID-19. At that time, two people with PPE were taking him out dead. From behind, another person was fumigating with bleach. It seemed unreal, like an apocalyptic war movie" (Susana). The majority of the participants defined the situation as apocalyptic, unreal, and total catastrophe.

Working in War Time

Participants commented that each day they had to handle changing information, manage PPE, control contagion, and be flexible and professional.

Participants discussed how the information changed day-to-day, the type and amount of information varying depending on the service where they worked and the corresponding supervisor. Every day, according to the participants, they met and received "the war report," their destination of that day at the hospital, and, depending on

the risk, they were assigned a type of PPE: "Every morning it seemed that you received the war report, you received a summary of the situation of the previous day, if someone was sick due to contagion or not, where do [sic] you will get that day, who will be your partner... and that is [it], nothing more" (Roberto). Some participants felt it was like being a soldier and being sent to the frontlines of the war after receiving the instructions of their commander.

Participants commented that using and working with PPE for long hours was a major personal and professional challenge. Some participants commented that putting on the PPE was to wear a uniform or armor. It was an exhausting, intense, and claustrophobic experience perceived by all, a new and scary situation: "Putting on PPE was a ritual. It is your armor, your uniform ... The eyes are the only source of communication. You feel alone, it was highly distressing" (Nerea). A protocol for putting on and taking off the PPE was learned as quick as possible. According to the participants, wearing PPE was the individual's own responsibility, because misuse could cause contagion and potential loss of a human resource and lives. Sometimes, PPE delivery was highly restrictive, and, due the small amount of PPE, it was economized. This situation led to reuse of PPE, that is, once the health care professional put on their own PPE at the beginning of the day, the PPE had to last all the working day, without the possibility of going to the bathroom: "The ratio of PPE per professional was 1:10. We have had to save on PPE, there were not enough for all professionals. If you wear the PPE, you cannot remove it either for going to the bathroom, you have to pee with it" (Eduardo). The majority of the participants described how, at the beginning of the COVID-19 war, no PPE was available for all professionals; therefore, "handmade" PPE with nonapproved plastic (garbage bags) was self-made. The lack of enough PPE and limited access to PPE was a constant source of conflict during the COVID-19 outbreak in Spain. According to the

participants, health care professionals had to complete their own PPE with extra protective material, such as waterproof glasses and protective screens.

The risk of contagion was experienced with concern and fear. Participants were not sure of virus-free hospital areas, so all of the hospital was perceived to be infected. They felt "like cannon fodder" at work, as they always perceived high threat of exposure. Twelve participants (40%) were COVID-19 positive and were withdrawn from work for at least 2 weeks: "Many health care professionals were infected. In one hospital, all physical therapist[s] working in the morning service shift [were] fallen by COVID-19 contagion" (Antonio). Participants reported how protective information was contradictory and changing day to day. COVID-19 screening tests were not systematically performed on health care workers at the beginning of the outbreak and were highly delayed, and guidelines for withdrawal from active service due to a positive contagion were confusing and modified weekly: "Health professionals were tested too late. Many asymptomatic positive health professionals were actively working for weeks. We did not know if we were able to infect and spread the infection in the hospital" (Daniela).

According to the participants, daily work was defined as unpredictable. Participants reported how they need to adapt to any unforeseen event, each day was different, any planning was almost impossible: "The location of the patients changed daily. Where there was originally an operating room, the next day [an] ICU appeared. It was like a war, everything changed, nothing remained [in] its place" (Patricia). This situation was defined as highly stressful, working with high physical and emotional demands and with extremely limited resources.

The majority of participants described the great professionalism of physical therapist and health care workers from hospitals, despite the adversity and emotional overload:

"...You couldn't close your eyes and not go to work, you couldn't waste time thinking that you didn't like it, you did what you had to do" (Mario). All participants highlighted their dedication, adaptation, resistance, resilience, affection, and humanity toward each patient with COVID-19, such as their ability to work until exhaustion. Participants commented that "staying at home was not an option" (Jorge). It is remarkable that all the participants pointed out how health care professionals worked together, helping each other, without distinction regarding profession: "Everyone contributed, I could be cleaning a patient, while the doctor helped to mobilize him" (Patricia).

When I Arrive at Home

Participants described that the return to home after work was scary. No protective guidelines for when participants arrived at home were available, and the effect of the pandemic on their home and family and on their personal relationships was described with fear.

In several countries during the acute COVID-19 pandemic crisis, including Spain, people were forced to stay at home ("lockdown"). The majority of participants reported that return to home was scary; streets were empty, there were no people, and all shops were closed: "When you arrive[d] at home, it was felt as chaos, everything closed, you did not see anyone, all was bleak and sad" (Paula). Their feeling was of living in a state of war (site status). According to the participants, they applied "a personal protective protocol" period: "Before I arrived, I applied the protocol, I warned my children, they went into the room and then [I] went home. I lived it with a lot of stress and tension" (Daniela). Before crossing the doorsill of the house, they removed their clothes and footwear and placed them in a separate bag, washed their hands and used disinfectant, and directly went to the shower. The majority of the participants reported that accessing their home could take more than 40 minutes each day. When returning to work, the

same clothes and footwear were reused. The objective was to keep working clothes separate from “home” clothes.

Some participants described how they tried to continue with their family lives; others did not maintain contact with their children during the first 2 months of the acute COVID-19 outbreak: “We had to control personal contact and closeness with the children. You couldn't hug them when they wanted to” (Pedro). In fact, all participants commented on how they made changes to their home habits to protect their family. Some isolated themselves in a room, minimized contact, and used separate bathrooms. All participants recognized that it was extremely hard to limit the contact with their partner and children staying at home. In those who tested positive for COVID-19, all these habits intensified: “If you are infected or have tested positive, you feel like a plague in your own home. You cannot leave, [no one] can enter” (Lucia).

Participants discussed that they experienced anxiety about maintaining a routine and normality at home during the acute outbreak, mostly when both parents were health care providers and had children or elderly people in their homes. All participants recognized that the pandemic affected their own families, particularly children who had trouble sleeping, irritability, mood swings, and sadness: “My daughter cannot sleep alone and she was sleeping with her father for 3 months” (Ricardo). Some participants reported that they did not have time to play with their children, since their responsibilities (eg, homework, food, showering) absorbed all their time.

Some participants described that they avoided talking about the pandemic at home. They did not want to worry or scare their families, and they believed that their families would not understand the situation and their experience: “I decided not [to talk] with them about everything that [has] occurred in the hospital. I commented [on] things, but not details. I decided to [tell] them half-truths” (Luisa). Some participants commented

that preferred to share their experiences with other health care professionals, as they could speak without restrictions: “Talking with other health care professionals instead [of] your family was ideal, you shared everything without taboos. With people outside the health care setting, you didn't want to share with them your emotions” (Maria). To avoid scaring their families, information on the pandemic was controlled, omitted, softened, or “de-dramatized” due to its harshness. Many participants did not watch television during the COVID-19 outbreak and recommended that their families not watch it, because television only showed a daily count of deaths and contagion, as in a war. According to the participants, society was not fully conscious of how dramatic and terrible everything was. Nevertheless, participants described how they always tried to answer questions, explain the situation, or clarify information provided on television to their children and their partner, if needed.

Discussion

Call of Duty

The COVID-19 pandemic has emphasized the capability of all health care systems across the globe. A preliminary report (letter to the editor) by nursing professionals describes the COVID-19 pandemic as a war.²⁴ Similar testimonies from orthopedic surgeons have been recently published.²⁵ To the best of our knowledge, and based on an extensive literature search, ours is the first qualitative study describing the experiences of physical therapists who have worked with patients with COVID-19 during the acute outbreak in public health hospitals in a European Country.

Two themes identified (Call of Duty, Working in War Time) described the COVID-19 outbreak as an apocalyptic war in the public health care system in Madrid. In this scenario, physical therapists were considered to be soldiers, as they actively joined the

battle and took up their responsibilities on the battlefield. All participants expressed that “staying at home was not an option.” Physical therapists, along with many other health care professionals, experienced the feeling of navigating unknown waters.²⁶ Every day many deaths occurred, as in a war. The health status of a patient with COVID-19 could change dramatically within a short period of time. People died within hours. Due to the lockdown, family members did not accompany patients at hospitals. Patients died alone, without external contact, and only health care providers could accompany them in hospitals. However, in this dramatic situation, one “positive” situation that all physical therapists experienced was that health care professionals from all medical specialties work together as one team. The COVID-19 pandemic led to no distinctions among internists, nurses, surgeons, or physical therapists. All professionals fought together against a common enemy: the virus. A similar scenario has been described in a large slum in India during the COVID-19 pandemic.²⁷ The health care team was composed of public health experts, doctors, nurses, paramedics, social workers, counselors, community health workers, and drivers who collectively coped by prioritizing the most critical areas (hygiene, food distribution, monitoring the health status of the person who was sick). The entire health care team had to modify their tasks and activities and established a communication routine to act in a timely and comprehensible manner, regardless of the profession. In contrast, this perception of a common team to cope with the COVID-19 virus might not be consistent among all health care teams. Schroeder et al²⁸ reported that registered nurses experienced a sense of isolation and also an increased responsibility on the frontlines, as other members of the clinical team sought to minimize exposure. Consequently, the nurses had to assume additional tasks that had been assigned to others, such as bringing patients their meals, administering nebulizers, emptying trash bins, and providing updates on the patients’ status to the team.

Working in War Time

Physical therapists considered the PPE to be their new uniform—their soldier armor. In fact, wearing PPE during long days of work at the hospital led to physical and mental distress. They felt that if they failed in putting on their PPE, they and their family would be at risk of contagion. Most physical therapists experienced fear and anger of a potential contagion, both professional and personal. During the COVID-19 outbreak, information for fighting the COVID-19 changed each day. Each day was a new fight; new information arrived at the hospital, and health care providers fought against an invisible enemy without proper information. There is evidence suggesting that frontline health care providers managing patients with COVID-19 had greater risks of developing post-traumatic stress mood disorders (eg, anxiety, depression, and insomnia).²⁹⁻³¹ These symptoms have also been described in military personnel,³² police officers, and people who experience repeated or extreme exposure to traumatic events (eg, terrorism or natural disasters).³³ The military are one subgroup of individuals who are actively and repeatedly exposed to terrifying events on a regular basis such as death, destruction, violence and uncertainty, putting them at a high risk of developing post-traumatic stress disorders (PTSD).^{34,35} In the military, PTSD presents with high levels of anxiety, stress, depression, and insomnia.³⁴ It even impacts on health, occupational performance, and quality of life.³⁶

When I Arrive at Home

The third theme was that when the participants returned at home after work, fear set in. Physical therapists had concern and fear about their family members, particularly children or elderly. The risk of contagion was “in the air.” This fear of contagion also has been present in nurses in previous, but much more controlled, infections, such as SARS.³⁷ The lack of information about data-driven hygiene protocols was often

transmitted to home, but some professionals were able to self-manage this situation by avoiding talking about COVID-19 with their families.

Implications for Clinical Practice

Current literature^{38,39} suggests that public health systems and health care professionals were not prepared for fighting against a pandemic like this. Our results reveal several points for improving the situation of health care professionals working at public health systems and for avoiding a similar chaotic situation in future outbreaks. First, improvisation and taking action once the pandemic is at your door is not feasible anymore. Across the globe, health care systems should be preparing for future pandemics *right now*. For instance, human resources, adequate supply of PPE, education and training of health care professionals, and institutional help for family support should be established.⁴⁰ Education and proper training of all health care professionals, including those not typically targeted as first line of action against a virus (eg, physical therapists), are key to assure that they are prepared to deal with worldwide or national sanitary emergencies. Workforce safety is a high priority to be implemented for future pandemics. In such a scenario, separation of living spaces, changing of clothing, and immediate showers after duty might help to reduce anxiety in health care professionals.⁴¹ Finally, the implementation of actions for proper identification and early action against the potential development of PTSD in physical therapists and health care professionals during and after the pandemic should be a priority.⁴² Previous studies reported that the resilience of health care professionals regarding COVID-19 is determined by exposure level, working role, years of work experience, social and work support, job organization, quarantine policies, and coping styles.^{30,31} It will be critical to account for all these potential factors to plan effective intervention strategies to enhance resilience—and to reduce the risk of adverse mental health outcomes—among physical

therapists facing the COVID-19 pandemic.^{30,31,42} Interventions that could be applied include controlling exposure, delimiting work areas, determining clear tasks and roles for physical therapists, conducting periodic mental health evaluations, and providing psychological support and monitoring.

Limitations

Due to the current sanitary situation, interviews were conducted with an online digital platform, which reduced the personal interaction between participants and researchers. Nevertheless, online digital platforms permit visual feedback between the participants and researchers, which is not possible by using other remote procedures such as telephone.⁶ Also, this study was completed with a small sample in 11 hospitals in central Spain.

Conclusions

This study provided a comprehensive and in-depth understanding of the personal experience of physical therapists treating patients with COVID-19 during the outbreak at public health hospitals in Madrid, the most affected area of Europe, through a qualitative approach. The COVID-19 pandemic was perceived as a war against an unknown enemy. Our results may help to organize and develop specific health care professional duties focused on COVID-19 health assistance objectives. Future studies may also investigate the long-term mental health effects of the COVID-19 pandemic on health care providers.

Author contributions

All authors contributed to the study concept and design. D. Palacios-Ceña and C. Fernández-de-las-Peñas conducted the literature review. All authors contributed to interpretation of data. D. Palacios-Ceña and C. Fernández-de-las-Peñas contributed to the first drafting of the paper. All authors revised the text for intellectual content and have read and approved the final version of the manuscript.

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Disclosure

The authors completed the ICMJE Form for Disclosure of Potential Conflicts of Interest and reported no conflicts of interest.

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Table 1. Criteria and Techniques Applied to Establish Trustworthiness

Criteria	Techniques Performed and Application Procedures
Credibility	<p>Investigator triangulation: each interview was analyzed by 2 researchers. Thereafter, team meetings were conducted in which the analyses were compared and categories and themes were identified.</p> <p>Participant triangulation: the study included participants belonging to different hospitals. Thus, multiple perspectives were obtained with a common link (the experience of physical therapists during the COVID-19 pandemic).</p> <p>Triangulation of methods of data collection: semistructured interviews were conducted, and researcher field notes were kept.</p> <p>Participant validation: participants were asked to confirm the data obtained at the stages of data collection. All participants were able to review the audio or video records to confirm their experience. None provided additional comments.</p> <p>Researcher reflexivity was encouraged via the previous positioning, performance of reflexive reports, and by describing the rationale behind the study.</p>
Transferability	<p>In-depth descriptions of the study were made, providing details of the characteristics of researchers, participants, contexts, sampling strategies, and the data collection and analysis procedures.</p>
Dependability	<p>Audit by an external researcher: an external researcher assessed the study research protocol, focusing on aspects concerning the applied methods and the study design. In addition, the external researcher specifically checked the description of the coding tree, the major themes, participant quotations, quotation identification, and theme descriptions.</p>
Confirmability	<p>Investigator triangulation, participant triangulation, and data collection triangulation were performed.</p>

Researcher reflexivity was encouraged by generating reflexive reports and by describing the rationale behind the study.

The positioning of the researchers was based on the following beliefs: (a) physical therapists were going to continue working in outpatient rehabilitation in the hospital, (b) they were going to include some system for prioritizing patients attending rehabilitation services, and (c) they were not going to have contact with the frontline of the COVID-19 pandemic.

UNCORRECTED MANUSCRIPT

Figure Captions

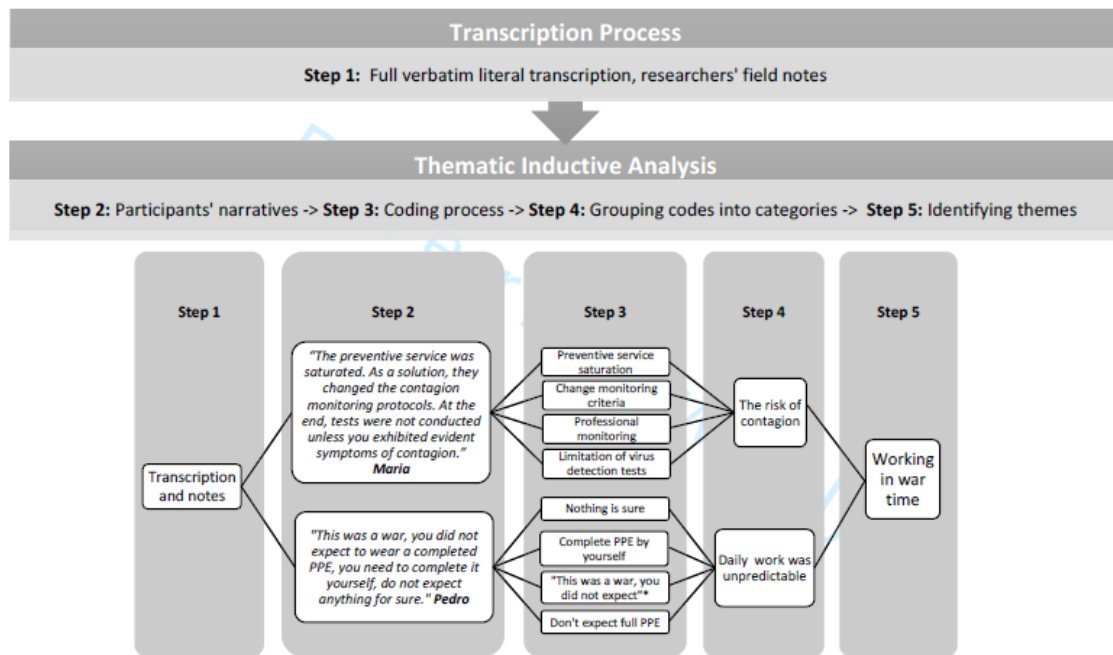


Figure 1. Transcription and inductive analysis represented in the examples step by step.

* = in vivo coding. PPE = personal protective equipment.

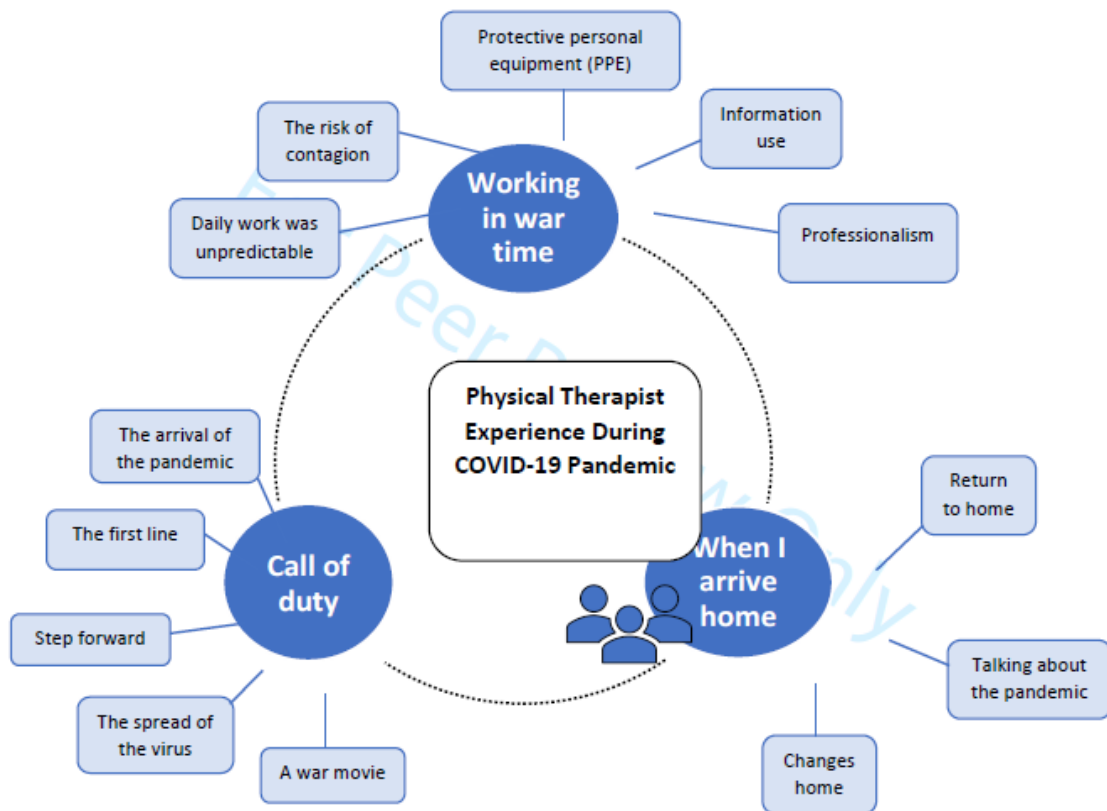


Figure 2. Graphical representation of the themes and subthemes identified in the study.