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Experiences, emotional responses and coping skills of nursing students as auxiliary health workers during the peak COVID-19 pandemic: A qualitative study

Abstract

The COVID-19 crisis in Spain has exacerbated the shortage of nursing staff to respond to increasing healthcare demands. For this reason, nursing students were requested to collaborate voluntarily as auxiliary health staff. This emergency has led to mental health problems in health professionals, hence the relevance of coping techniques. The objectives of this study were to explore the experiences and emotional responses of final-year nursing students who volunteered to carry out healthcare relief tasks during the peak of the COVID-19 pandemic, as well as to identify the coping strategies they adopted to deal with this situation. A qualitative study was conducted in the constructivist paradigm. Purposive sampling was used, and twenty-two students participated in semi-structured interviews which were then content analyzed. The study is reported using the COREQ checklist. Five themes emerged in the "Experiences and emotional response" dimension (context, patients, emotions and feelings, risk of contagion, and personal satisfaction), and three themes emerged in the "Coping strategies" dimension strategies in the work environment, in daily life and personal life. Although the students expressed negative emotions due to the highly complex context and lack of professional experience, they evaluated the experience positively in terms of learning and usefulness. Most notably, the students employed adaptive coping strategies to deal with the pandemic.

Keywords: Emotion, Coping Strategies, COVID-19, Nursing, Student

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Introduction

The high prevalence, transmissibility, and associated morbidity and mortality rates of COVID-19 among the global population have placed unprecedented demands on health and social care services worldwide (Maben & Bridges 2020). Because of this public health emergency, nurses are working tirelessly on the front line, as they have always done (Jackson et al. 2020). The pandemic has placed the nursing workforce under extreme pressure in countries across the globe, including Spain (Ministerio de Sanidad & Gobierno de España 2020), thus nursing students have been given the opportunity to bolster the nursing population in hospitals in order to cope with the surge (real or projected) in critical patients (Hayter & Jackson 2020).

The global healthcare workforce has been subjected to two types of pressure. The first is the heavy burden of illnesses arising from the pandemic, which is placing a strain on health systems; the second is the adverse effects on healthcare professionals, including the risk of infection (Adams & Walls 2020), moral injury or mental health or emotional problems (Greenberg et al. 2020). This unprecedented health emergency has also seen the emergence of coping strategies (Huang et al. 2020) that focus on alleviating emotional discomfort. Hence, these coping strategies seek to maintain nursing students' well-being and cushion the impact of stressful situations in the clinical environment (Teixeira et al. 2016).

Background

The inadequate strategic preparedness to deal with the global COVID-19 pandemic (Wang et al. 2020) has led to a shortage of skilled healthcare personnel (Liu et al. 2020). In Spain, this shortage has been compounded by previous spending cuts in healthcare and an increase in sick leave of infected nurses (Kennedy 2020; Raurell-Torredà et al. 2020). In the light of this situation, the Government of Spain issued ministerial order SND/232/2020 of 15 March (Ministerio de Sanidad & Gobierno de España 2020), authorizing the hiring of final-year nursing students as auxiliary health staff to provide healthcare support under the supervision of professional nurses. Having had their clinical practice placement suspended due to the COVID-19 pandemic, many students volunteered for social, vocational, and moral reasons (Collado-Boira et al. 2020). Those students, like other health professionals, risked their health (Martinez et al. 2020).

During their studies, nursing students move between the university sector and the health sector and occupy the position of learner in both. In the regular course of events, the goal in both sectors is primarily to meet the learning needs of students (rather than the operative healthcare needs). Universities and healthcare providers make use of various strategies to enhance student learning when in clinical practice placement. These strategies range from the use of mentorships and clinical teachers, guided reflection activities, prebriefing and debriefing. These strategies not only enhance student learning by helping them to derive meaning from events that occur in a clinical environment but also allow for the early identification and solution of any problems that students encounter in the clinical setting. However, it was not known whether these or similar strategies would be available to students opting to volunteer as auxiliary health staff and

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if so, what form they would take) in the context and environment of the COVID-19 pandemic (Hayter & Jackson 2020).

Qualitative research on health professionals' experience in pandemics, such as Severe Acute Respiratory Syndrome (SARS) (Gearing et al. 2007) or H1N1 Influenza pandemic (Corley et al. 2010) has yielded beneficial information. A structured analysis of the subject's individual experience offers a valuable tool to better organize resources and human infrastructure in unpredictable health emergencies (Collado-Boira et al. 2020). Thus, experience must be a focus of study, since it conveys contextual elements and helps interpret reality, reflecting socio-cultural and personal aspects (Erausquin et al. 2016). A wide-ranging and comprehensive insight into such experience will help evaluate and understand this healthcare crisis in order to adapt both the healthcare (Martinez et al. 2020) and the academic models.

On account of the relative dearth of research on the impact of COVID-19 on nursing students and their ability to cope adequately with it, this qualitative study aimed to explore the experiences and emotional responses in final-year students of nursing who volunteered to undertake healthcare assistance at the peak of the COVID-19 pandemic and to identify the coping measures they adopted to deal with the situation.

Methods

Design

A qualitative study was conducted to ascertain the problem according to the individual experiences of the participants (Patton 2014). Hence, according to constructivism people learn by interacting with the environment and making sense of it and their experience (Mogashoa 2014). From the constructivist perspective, the experience is fundamental since the conception of reality is based on the student and the construction that he or she makes of his or her experience. This approach rests on the fact that there is no objective reality, and that experience allows for the understanding of social constructions about the meaning of what has happened.

Context and participants

The participants were final-year undergraduate nursing students at the Faculty of Nursing and Physiotherapy (FIF) of the University of Lleida (UdL). The students were selected using purposeful sampling based on pragmatic and convenience criteria (feasibility, access, interest, time) until data saturation was reached (Luciani et al. 2019). The characteristics of maximum information and variety were addressed (Johnson et al. 2020). Key students who worked as auxiliary health staff in nursing homes, hospitals or specialized units in contact with COVID-19 patients were selected. There were no exclusion criteria.

Ethical considerations

This study was authorized by the FIF studies committee of the UdL. All participants were informed orally and in writing about the formulated objectives and methodology of the

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study. Subsequently, and before data collection, the participants signed an informed consent agreeing to participate. The research team securely stored data and confidentiality and anonymity were ensured by assigning a numerical code to each interview, in compliance with Organic Law 3/2018 on Personal Data Protection.

Data collection

Data were collected using semi-structured interviews. The research group prepared a preliminary two-part script: the first containing basic data describing the sample, and the second, the interview outline (Table 1). The interviews were carried out in April 2020 by 4 PhD researchers (JR, OM, TC, AL), who had taught the interviewees in previous years, but not when the interviews took place. Therefore, the students did not feel compelled to participate for academic reasons.

The recruitment of the students as auxiliary health staff was done by the Department of Health of the state government. The university had a record of the students who did this work (fifty-four students). From this record, the students were contacted according to the criteria of access, their interest in participating and the proximity to the theme of the study. Each researcher contacted 5 students at their convenience by telephone or email to provide information and request participation in the study. All the students contacted agreed to be interviewed. Later, 2 additional students were interviewed to reach data saturation. Consequently, twenty-two out of a population of 54 students participated.

The interviews, recorded with the interviewees' permission, took place using Skype software. They were both audio and video recorded. The video was used to allow for a life-like situation as the interviews would have been done live were it not for the rules of confinement and social isolation in the pandemic. To ensure confidentiality and avoid interruptions, the students were recommended to use an adequate room or space. Each interview lasted a minimum of 35 minutes and a maximum of 1 hour and 18 minutes. No interview was repeated. The interviews were conducted and transcribed verbatim in Catalan or Spanish, both official languages in Catalonia, an autonomous community in Spain. For the translation to English, the research team and translators worked together to make sure that its content was true to the original. Subsequently, the interviews were returned to the participants for their approval of the content. All of them accepted the content of the interviews.

Data analysis

The texts were analyzed using the content analysis comparison method (Leech & Onwuegbuzie 2017) supported by Atlas-ti version 8. This procedure prepares, analyzes and codes the data. After, the codes are grouped by similarity, and a theme is identified and documented based on each grouping.

Rigor and quality criteria

The criteria of scientific rigor proposed by Johnson et al. (2020) of credibility, dependence, confirmability and transferability were ensured throughout the study. The research team undertook constant revisions of the dimensions, themes, units of analysis,

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and evaluation, ensuring qualitative validity (Díaz 2018). The checklist of COREQ qualitative designs was used to execute and evaluate the study (Tong et al. 2007).

Results

Twenty-two students in their final year of the nursing degree took part in the study. Table 2 shows the main socio-demographic data, with ages ranging between 20 and 30 years. Approximately one third of the participants had previous experience working in healthcare, and most of them had worked in hospitals during the peak pandemic.

The findings of the present study were based on two dimensions, which were subdivided into 8 themes that emerged from the content analysis (Figure 1). Five themes emerged in the "Experiences and emotional responses" dimension: 1) context in which nursing students carried out clinical practice, 2) characteristics of people with COVID-19 and care experience, 3) emotions and feelings arising from the duties performed as auxiliary health staff, 4) perceived risk of contagion and transmission of the disease, 5) personal satisfaction derived from clinical practice. Three themes emerged in the "Coping strategies" dimension related to the place where they were developed: 6) work context, 7) daily life context, and, 8) personal context.

Experiences and emotional responses dimension

The development of this dimension is shown schematically in Table 3, detailing the theme, its definition, the linked sub-themes, and an example of supporting evidence.

The first challenge the students faced was to volunteer to undertake auxiliary health work. In most cases, they made this decision with their family, and they had to move away or leave their home environment:

> *"The days before going to the hospital were horrible because you didn't know what you were going to find or how serious the situation was; you didn't know anything at all."* P2_(4479-4732) or *"... we didn't know if they really needed nurses ... and if we students were the last resort, so respect and anxiety."* P14_(5921-6601).

Thus, the participants reported uncertainty not only about the situation but also about the work they would have to do, and their legal coverage:

> *"The dilemma begins … they drew up an auxiliary health worker contract so I was not allowed to do nursing tasks. I would not be protected legally if I would perform them"* P9_(16041-17005).

Some students saw their initial experience as a reality check:

> *"I think we were all very naïve at the beginning ... finally, starting work was a huge wakeup call, you realize the magnitude of what is really happening."* P1_(4060-4727).

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The context of professional practice goes beyond a mere physical space, given that it is a means of interaction between professionals and patients. The situation was defined as a highly dynamic and changing context, and one of great complexity:

> *"... it's complicated because the situation is a very fast-moving, it's not static because, well ... you need to constantly update and adapt your knowledge."* P20_(4032-4072).

Furthermore, some students acknowledged they were unprepared to cope with the situation:

> *"The truth is that when I saw the panorama on the first day... I didn't feel at all prepared."* P8_(1266-1619).

However, the students managed to adapt and accept the situation:

> *"It started all at once, we were suddenly taken out of clinical practice placement, and well, they suddenly called us, just like that ... suddenly you were working there. It was awful at first, and then you calm down, you experience everything, you try to adapt and relativize it. And now, well, I'm thrilled."* P5_(3072-3772).

They had to deal with a challenging situation:

> *"It was very demanding, ... the fast pace of the work, the stress and lots of pressure."* P15_(13267-13687).

The participants also observed that due to a shortage of resources to meet the patients' needs, both in hospitals and in nursing homes, the professional interventions generated ethical dilemmas and conflicts. As an example, one student described the shortage of beds in the Intensive Care Unit (ICU):

> *"We needed more ICU beds ... so we had to decide who would and who wouldn't, it was difficult to understand ... you understand that ... but having to accept that … (silence)."* P7_(10806-11425).

Referring to the characteristics of the person with COVID-19 and how they influenced care, the students recounted the difficulty of providing care to physically unstable patients:

> *"The patients change very quickly ... their state of health ... but suddenly their oxygen saturation levels decrease and then it becomes complicated."* P13_(9604-10794).

They also identified patients' psychological instability, which was compounded by their lack of company of family members or loved ones, a situation that was most evident in the nursing homes:

> *"Phew! ... I think about this more than anything else ... seeing them alone ... without relatives, letting them die without anyone ... (silence)."* P4_(14390-14832).

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Furthermore, the professional practice context elicited multiple emotions and feelings in these advanced beginners:

> *"At least the nurses are with them ... many professionals don't have enough time to be there for them. And deep down that was killing me ... I don't know ... talking to them, even when they're sedated and intubated, because in the end when you see them, you sense they're very aware of where they are."* P8_(3966-4609).

> *"The truth is, when you're actually there, it's another matter, seeing the patient having a bad time; what surprised or hurt me the most was seeing people alone, people dying alone."* P3_(3140-3888).

However, it is important to stress that the participants were fully aware that the exceptional decisions made were influenced by the context, such as having to prioritize care among patients or not allowing family members to visit dying patients. This situation had a huge emotional impact on the students:

> *"I believe we don't give the palliative care they need ... and that will stay with me forever ... but, given the circumstances, we do what we can, and this make us feel good."* P10_(15003-15299).

Another issue that emerged was the risk of contagion and transmission of the disease. The students expressed fear of and stress about this possibility, but at the same time, it generated an adaptive response. Because of the possible risk of infecting their families, they took extreme precaution:

> *"It's true that in this case, I try to take all possible hygiene measures, washing my hands regularly, changing gloves; whereas you didn't think so much about this during clinical practice placement ... and I also think about my family when I do this."* P2_(29219-29794).

Unlike in hospitals, it took some time to implement specific safety measures and the use of personal protective equipment (PPE) in nursing homes. In that context, the students felt less protected:

> *"It took a long time for the nursing home to establish an insolation protocol ... We received PPE, but we were instructed to reserve for [COVID] cases, and people were already getting high temperatures ... it's so badly organized."* P6_*(5898-6393).*

Finally, the students positively assessed and felt personally satisfied with the decision they had made to help:

> *"Despite the suffering, I felt I was doing good and could help people. That good compensates for the bad."* P1_(20795-20896).

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In addition, they assessed the outcome positively, both in terms of compensation and usefulness (both professional and that corresponding to the patient) as well as for the learning opportunity it provided:

> *"This makes me feel really satisfied because I don't just see what others are doing, I'm doing it too...this is my life-learning experience."* P3_(36660-36907) or *"You feel very useful helping the nurses, and the patients are extremely grateful, which makes you feel good."* P18_(11372_11875).

Coping strategies dimension

The students' experience as auxiliary heath staff prompted different psychological and situational coping strategies that were classified according to the developmental context: work, daily, and personal (Table 4).

The strategies adopted in the work context refer to adaptation and coping processes used in the professional environment, which was complex and stressful. The participants withstood the pressure of the environment thanks to their interrelationship with colleagues, the peer groups (mostly through social networks due to the confinement) or through the healthcare facility's psychological support systems:

> "*There's a psychological helpline; you call it and tell them what you need ... you can count on them, on their help*." P12_(10782-11086).

Another outstanding facilitator was the development of teamwork competencies by all the healthcare personnel (nurses, doctors, assistants...):

> "*The hospital is different ... but now it's about more about teamwork, there is more camaraderie among professionals.*" P6_(3846-4390).

Lastly, they described seeking the latest information about care for COVID-19 patients as a positive reinforcement measure to gain confidence:

> *"... trying to have everything clear in your head before you get there, reviewing concepts, trying to have an idea of what a COVID patient is like, reading up before going.*" P5_(14730-15026).

Regarding the strategies used in the daily context, they mentioned behavioural and physiological activities. The participants felt the need to plan their basic daily routines as a means of stress management. They highlighted elements such as following a healthy diet, taking physical exercise or planning rest periods:

> "*To offset the stress you mean, don't you? Well, I first organized my rest because when I get upset, I lose my appetite and if my sleep is disturbed ..., then the first thing I did was to stick to that, going to bed at 9 o'clock and reading ...*" P1_(8674-8928).

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At a personal level, the strategies included activities aimed at releasing emotions, both individually and in groups. Table 4 shows the psychological or instrumental resources, combined with personal ones (amusement, humour, religion) and social elements used by the students:

> "... so*, watching some series on television, spending time with my partner...these are things that help me." P11_(12152-12380).*

Another participant remarked:

> *"I'm Muslim, so praying and having faith in my religion also helps me a lot, and sometimes just spending time alone."* P17_(20050-20193).

They also combined these resources with cognitive restructuring to reflect and generate more appropriate responses:

> "*And more time for me above all, to find peace, to think ... when I leave the hospital, for example, I always sit in the sun, listening to music, and remove my mask; these are the most important moments, ...*" P8_(11150-11366).

Moreover, no student reported having resorted to behavioural avoidance, such as denial or substance abuse. More difficulties were mentioned at the initial stage:

> "*it was difficult in the first few days to learn to differentiate ... to try to leave the things at work and not bring them home.*" P9_(10436-10604).

It was not easy to adapt to the new situation, given the unanticipated and disorganized transition between the mentored student and the professional, and with more uncertainty than usual due to the pandemic. This led some students to express conflicting emotions. On the one hand, there was the desire to help, but on the other, negative coping at the professional level due to a lack of resources:

> "*… on Friday I was alone with only one nurse. When I got home, my father asked me how it had gone. I replied, look, if the healthcare sector is like this, I resign. We weren't able to give the help that those people needed." P19_*(29093-29495).

Finally, effectively tackling the situation allowed the students to reflect on the context, on learning and strengthening the available resources:

> *"I'm now able to respond a complex situation and correctly manage and organize the response I have to give." P*10_(15165-15881).

Discussion

The present study explored the experiences and emotional responses of final-year undergraduate students of nursing who volunteered to perform auxiliary health support during the outbreak of the COVID-19 pandemic. The research also investigated the strategies they used to cope with this situation.

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The students' decision to become auxiliary health workers was voluntary, and despite uncertainty surrounding the situation, the tasks they would have to perform and their legal coverage to do so, many students accepted it. Similar actions to address the increase in critically ill COVID patients (Hayter & Jackson 2020) are being taken elsewhere in the world. In this sense, the possible motivations that led them to accept it have been identified, being mainly for ethical, moral, altruistic and vocational reasons (Collado-Boira et al. 2020), aspects and values that are inherent to nursing professionals (Cai et al. 2020).

Experience and emotional responses

Regarding the emotional experience and response dimension, most of the students defined the context of developing professional practice as dynamic and changing, requiring a high capacity for adaptation. Furthermore, they identify the high complexity of care with a heavy workload, which is a professional challenge, but at the same time, this made them aware of the situation and taught them how to cope with reality. The nurses and nursing students not only experienced an increased volume and intensity of work, but they had to adapt to new protocols, making the nature of care and new ways of working were highly stressful for staff (Maben & Bridges 2020). Additionally, students encountered ethical conflicts brought about by the pandemic that conditioned their decision-making. Bellver-Capella (2020) also identifies contextual elements as determinants in healthcare.

This study also underlines the difference in care and resources between hospitals and nursing homes, the latter being most affected by the pandemic (García-Rada 2020), given the association between old age and the presence of comorbidities with a higher risk of mortality from COVID-19 (Fallon et al. 2020). Moreover, this fact was aggravated in nursing homes by a lack of PPE and a shortage of testing kits (García-Rada 2020).

The feelings triggered in students by the pandemic included helplessness, anxiety, uncertainty, and distress. However, it would be difficult not to experience emotional reactions to the virus and its impact on the work itself. Fear and anxiety are normal, as are the intense feelings experienced when nurses feel unable to care for patients as they would in normal situations (Maben & Bridges 2020). It is worth noting that participants presented experiences that could be considered a moral injury, such as reported by other authors (Williamson et al. 2020). Moral injury has been defined as the psychological distress that results from actions, or the lack of them, which violate someone's moral or ethical code (Litz et al. 2009). In the healthcare context, moral injury has been mentioned when healthcare providers have not been able to prioritize the needs of the patients, which can provoke moral and ethical dissonance. In the case of our participants, they may have felt a distressing disconnection between the values transmitted in their formation (help people and do no wrong) and the reality of the pandemic. Thus, the COVID-19 pandemic may have caused potentially morally injurious events, which can lead negative thoughts about oneself or others, as well as deep feelings of shame, guilt or disgust. These, in turn, can contribute to the development of mental health problems (Williamson et al. 2018), such as depression, anxiety or substance use disorders. Our study did not identify mental health consequences among the participants, although

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some have been described in other research (Hines et al. 2020; Reverté-Villarroya et al. 2021; Williamson et al. 2020). Nevertheless, this could be confirmed through a follow-up study of these students and expanded in a quantitative study.

The students particularly emphasized feelings of sadness towards suffering and death, adding that isolation measures meant the presence of a relative was rarely possible, which also led to COVID-19 patients dying alone. This aspect has already been identified by other authors (Jackson et al. 2020). In this regard, different studies have detected the need for health science students to integrate coping strategies focused on care for the dying patient (Trivate et al. 2019; Williams et al. 2005).

The students mentioned the need to keep up to date on their knowledge and recognized their lack of preparation to cope with the situation. Initially, this made them feel inadequate; an aspect that has also been reported by other authors (Collado-Boira et al. 2020). However, the students' fears and perceptions are fully justified (Ramírez et al. 2011) and are consistent with the experiences of other health professionals who have worked in hospitals during pandemics such as SARS in 2003 (Ramírez et al. 2011; Maunder 2004) or COVID-19 (Chen et al. 2020; Liang et al. 2020).

The risk of self-contamination and transmission of the disease to those closest to the volunteers, through constant exposure to the disease, was another aspect highlighted. Evidence from studies on outbreaks of COVID-19 and other respiratory infectious diseases also reveals a considerable concern among nurses for their personal safety and that of their families. Direct contact with a potentially deadly virus and the stress of balancing this worry with ethical obligations to continue providing care (Adams & Walls 2020; Chen et al. 2020; Cai et al. 2020; Xiang et al. 2020) has also been found in nursing students (Collado-Boira et al. 2020). However, in general, the students in this study were more fearful of transmitting the virus than of the contagion itself. Given that they are young people without underlying medical conditions, the virus would have had fewer consequences for them than for other population groups or vulnerable people.

However, despite the negative experiences and the emotions generated, the overall assessment was positive. They saw it as an opportunity to learn and be useful, which compensates for the distress experienced, and they were moved by the gratitude and appreciation shown by the patients. Initiatives such as public applause to the frontline staff helped to their boost their morale, and some nurses have been moved by the collective recognition of gratitude (Maben & Bridges 2020). On the other hand, this positive assessment could also be based on the concept of experiential learning as an opportunity for professional adaptation and socialization (Lee & Yang 2019). Because these students only performed delegated tasks according to their competencies in a clinical setting and under the supervision of the nursing team, the fact that they did not have to make clinical decisions could also be a liberating factor. Finally, their motivation through direct involvement in combatting the pandemic might also have had a positive influence.

Coping Strategies

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The coping strategies used in the work context were teamwork, psychological care from the healthcare institution, seeking information on COVID-19 care, and peer support, primarily through social networks. Health professionals are widely recognized for their ability to care more for others than for themselves, so they are likely to need others (peers, friends and managers) to remind them to think about themselves (Maben & Bridges 2020). This was also evident in other contexts (Greenberg et al. 2003).

The participants planned their daily routines and, above all, observed their rest periods. In this sense, it was essential that during and after work, the nurses prioritized their well-being as much as possible by ensuring they met their basic needs for drink, food, rest and sleep (Cole-King & Dykes 2020). In a time of crisis, human physiological and safety needs take precedence (Kenrick et al. 2010), as confirmed in interviews with medical personnel (including nurses) who treated COVID-19 patients at a hospital in Hunan (Chen et al. 2020).

Other personal strategies found included receiving support from family and friends, recreational activities, self-reliance, humour, and religion. These strategies appear in other similar studies (Savitsky et al. 2020). Additionally, certain personality traits, such as optimism, resilience, and altruism, have also been shown to have positive effects in reducing psychological stress (Wu et al. 2009; Park et al. 2018; Savitsky et al. 2020). Most people exposed to highly challenging traumatic events show resilience and do not suffer long-term adverse psychological effects (Rubin et al. 2005). Still, some will inevitably experience distress, but in most cases, these symptoms disappear without the need for formal interventions (Greenberg et al. 2015). However, while staff will need resilience, it should never be seen as an individual responsibility, but rather as a collective and organizational responsibility (Traynor 2018).

Finally, it should be noted that the strategies adopted by the students were adaptive and were undertaken autonomously based on their clinical practice placement experience and previous theoretical knowledge, clearly coinciding with those offered in Chinese hospitals during the COVID-19 outbreak (Chen et al. 2020).

Limitations

This study has some limitations. One is that it is only transferable to similar healthcare and university training contexts. A larger sample of participants from different educational backgrounds who have experienced the investigated phenomenon would reinforce the consistency of the present study. In relation to the context, the hospital centres were urban centres of large and medium populations, and rural healthcare aspects or community care were not addressed. It is also important to note that, as a qualitative design study, it was not possible to quantify the effect of the experience on the students' mental health, since the research only allowed for the description of moods or feelings. This limitation could be overcome with a mixed methods research design. Another limitation was that the study was carried out at one point in time, and there was no follow-up to evaluate the evolution of the students. Finally, only 3 of the 22 participants were male. However, these data do not represent gender bias since most nursing students are female.

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Conclusion

This study provided insight into the experiences and emotional responses of undergraduate nursing students who volunteered to perform healthcare assistance at the peak of the COVID-19 pandemic in Spain. The students conveyed messages based on negative emotions such as helplessness, anxiety, uncertainty, and suffering. They likewise expressed concern about possible infection and transmission of the disease to their families. The students worked in a highly complex scenario and faced critical situations such as the death of patients. Despite this, they positively appraised the experience as an opportunity to learn and to feel useful.

This research provides a complete description of the coping strategies adopted by the students to address this unprecedented situation. Despite being students, who were not yet nurses and did not have sufficient independent care experience, these strategies proved adequate in dealing with the pandemic.

Implications for practice

In this unprecedented global health crisis exceptional actions have been taken by the authorities to incorporate volunteer final-year nursing students into the health system. We believe that this study provides knowledge of the emotional experiences and coping strategies these students took to deal with the situation, which will form the basis for a faster and better response in the future. The students do not only need educational programs that train them how to take care of the patient with COVID-19, but also a comprehensive monitoring program to detect possible stressors and offer psycho-emotional support strategies to avoid psychological consequences. These support programs must be led by mental health professionals, offering both face-to-face and online services, at both universities and health care centres so that they are accessible to whoever has the need.

It is also important that clinical nurses reinforce support and tutoring to students to better adapt to the professional context. The students must participate in multidisciplinary meetings as this will improve their understanding of the situation caused by the pandemic. In addition, it is necessary to create an environment that allows students to share their emotions and feelings generated in clinical practice placements, using strategies such as debriefing and defusing. Fortunately, these are widely known and used in formative clinical simulation. However, there is no doubt that their development requires continuous and programmed work between the universities and health care centres. The students have shown a capacity to respond, but this must be enhanced during nursing training. It is essential to integrate support and the management of emotions into the academic curriculum content to guarantee the mental health of students through subjects like psychology or mental health care. Hence, the development of emotional self-care strategies (relaxation exercises, meditation, mindfulness, sports, hobbies, …) should be encouraged so that students learn to take care of themselves, their patients, and public health in general.

Conflict of interest

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