











From students to nurses under pressure: Nursing students' entry into employment during the first COVID-19 wave

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Funding information

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Abstract

Aims and objective: To describe the experiences of nursing students and their mental health as they entered employment during the first wave of the COVID-19 pandemic (May–June 2020).

Background: As other healthcare professionals, nursing students who worked during the first COVID-19 wave suffered from dysfunctional mental health symptoms.

Design: Sequential, mixed-method, multicentre study.

Methods: The study population comprised 92 students in the third and fourth year of the Nursing degree at three Spanish universities, who entered employment during the pandemic. Data were collected between May and June 2020. In the quantitative phase, data were collected using an online questionnaire containing both validated anxiety and stress scales. In the qualitative phase, semi-structured interviews were conducted with 18 participants. A descriptive analysis of the quantitative data and a reflexive thematic analysis of the qualitative data were carried out, and analyses were combined. COREQ checklist was used for reporting.

Results: The combined quantitative and qualitative results were organised into five thematic areas: (1) Interruption of clinical placements, (2) Entering employment on a healthcare assistant contract, (3) Preventing contagion, (4) Adapting to the situation and managing emotions, and (5) Lessons learned.

Conclusion: The students had a positive overall experience of entering employment, as they were able to develop their nursing skills. However, they had an emotional impact in form of stress caused by excessive responsibility, academic uncertainty, lack of personal protective equipment and training in its use, and the possibility of spreading disease to their family members.

Relevance to Clinical Practice: In the current context, changes must be made in study programmes to instruct nursing students to be able to cope with extreme clinical

situations, such as pandemics. The programmes should include a more extensive coverage of epidemics and pandemics and management of emotional aspects such as resilience.

KEYWORDS

anxiety, COVID-19, mixed methods design, nursing students, stress

1 | INTRODUCTION

In March 2020, the WHO declared the outbreak of the novel coronavirus SARS-CoV-2 as a pandemic. Amid the ensuing public health emergency, teaching activity at educational establishments was suspended, including universities (Newell, 2020). The pressures placed on the health system by the COVID-19 outbreak made it necessary to reorganise healthcare activity to make more units available for treating infected people and to reduce or even suspend activities deemed to be non-essential. The shortage of material and human resources to meet demand prompted initiatives to recruit healthcare students and trainee specialists to assist in providing health care. Similar measures were adopted in several countries, including the United Kingdom (Swift et al., 2020). These measures provoked controversy in the academic world and in the healthcare sector (Swift et al., 2020), due in part to concerns over the conditions in which students would enter employment.

During the first wave of COVID-19, Spain recorded the highest number of infected professionals in the world, as there was a severe lack of personal protective equipment. At the end of March 2020, almost 14% of the reported cases involved healthcare workers (Royo, 2020). In June 2020, Spain was the third country in Europe in terms of the number of COVID-19 cases, which led to the collapse of healthcare resources. This made it necessary to redistribute hospital resources and relocate healthcare professionals. For instance, ICUs were expanded to double or triple their capacity (Miralles et al., 2021).

In this context, the national Spanish government approved *Order SND/232/2020 of 15 March containing measures to provide human and material resources to manage the public health crisis caused by COVID-19*. This norm stipulated that students in the final year of the Medicine and Nursing degrees could be recruited to the healthcare services in the different regions in the country on an immediate basis. Under the Order, the medical and nursing students were recruited as Healthcare Assistants, who would provide assistance in healthcare settings and were to be supervised at all times by a qualified healthcare professional. In subsequent weeks, nursing students, mostly in the fourth year of the Nursing degree or those who had finished their theoretical training and had only the bachelor thesis and their practical training left to complete (Aslan & Pekince, 2020), began to work in healthcare settings such as hospitals, nursing homes and medicalised hotels (Gómez-Ibáñez et al., 2020).

What does this paper contribute to the wider global community?

- Excessive responsibility, academic uncertainty, lack of personal protective equipment and training in its use, and the possibility of spreading disease were aspects that made nursing students who worked during the first COVID-19 wave suffer from dysfunctional mental health symptoms, leading to stress and anxiety.
- It is important to reinforce healthcare studies' curriculum to include more aspects on epidemics and pandemics and on emotional coping strategies to better deal with potential future similar situations.

2 | BACKGROUND

Nurses and nursing students faced professional and psychological challenges in providing care during the COVID-19 pandemic. Recent studies indicate that the risk of negative health impacts for nurses caring for patients during a pandemic was higher than for other healthcare professionals (Sun et al., 2020). When confronted with COVID-19, negative reactions, such as fear, anxiety and psychological distress, were frequently observed among health professionals (Majrashi et al., 2021). Studies have already been conducted on the emotional distress experienced by nurses during a health emergency (Xiao et al., 2020) and after the crisis has passed (Sun et al., 2020). In Spain, senior nursing students who experienced the COVID-19 pandemic reported an increased risk of mental health problems after the pandemic (Reverté-Villarroya et al., 2021).

However, both positive feelings (desire to help, opportunity to learn, affirmation of professional identity, sense of self-growth) and negative feelings (fear of becoming infected and concern about their inadequate psychological preparation for practice in clinical settings) have been reported, particularly during unexpected situations such as the COVID-19 pandemic (Luo et al., 2023; Sun et al., 2020; Velarde-García et al., 2021).

Spanish studies on students' experiences as healthcare assistants highlight the emotional intensity of the experience, which aroused contrasting emotions such as pride, fear, sadness, anger and powerlessness, with fear and uncertainty emerging as the most prevalent emotions (Collado-Boira et al., 2020). Students were also concerned

about integrating into the team and communicating with patients. In addition, they had to adapt to the protective measures put in place and to changes in care protocols and needed further assistance in the transition process (Casafont et al., 2021). Lack of supervision and mentoring and unclear definition of roles were manifestations of the difficult clinical environment that prevailed during the COVID-19 pandemic (Velarde-García et al., 2021). An issue explored less frequently in existing studies is the decision-making process that prompted students to begin working as healthcare assistants amid a context of academic uncertainty (Aslan & Pekince, 2020) in which work would take precedence over completion of their bachelor theses.

The overall aim of this study was to describe the experiences of nursing students and the impact on their mental health as they entered employment during the first wave of the COVID-19 pandemic (May–June 2020).

3 | METHODS

3.1 | Design

This is a sequential, mixed-method, multicentre, explanatory study in two phases: (1) descriptive observational study via a questionnaire with open and closed questions; (2) qualitative phenomenological study via semi-structured interviews. The consolidated criteria for re-reporting qualitative research (COREQ) (Tong et al., 2007) checklist were used in reporting methods and findings (See Appendix S1).

3.2 | Sample/participants

This multicentre study was conducted at three universities in different regions in Spain. The inclusion criteria for the sample were as follows: being a nursing student, having worked as a healthcare assistant during the first COVID-19 wave and voluntarily agreeing to participate in the study.

In the quantitative phase, convenience sampling was used to select the sample. The questionnaire was sent to all students who had completed their theoretical training and had only their bachelor thesis and practical training to complete ($n=413$) at the three universities via email through the virtual campus of each institution. A total of 216 nursing students responded to the questionnaire initially (a response rate of 52.3%). At the beginning of the questionnaire, students had to declare whether they had started working as healthcare assistants. Those who declared that they were working ($n=92$, 42.6% of respondents) were selected to be part of this study. Data collection was carried out in May 2020.

In the qualitative phase, purposive sampling was used to select participants during May 2020. The only additional inclusion criterion was to provide contact information at the end of the questionnaire in the quantitative phase to indicate a willingness to participate. Then, they were contacted by the researcher who was going to conduct

the interview via email, who explained the aim of the study and their position at the university. Interviews continued until the authors considered that data saturation had been reached (at 18 interviews), meaning that no additional data had been found to exemplify the set of codes created a priori, which were based on the script and the questionnaire (Saunders et al., 2018). Data collection lasted until June 2020.

3.3 | Data collection

3.3.1 | Quantitative phase

The ad hoc questionnaire can be seen in Table 1. The independent variables were sex, age, region, number of days since starting work as a healthcare assistant, number of days' notice prior to starting work, type of contract, professional role stated on contract, number of hours per shift, department, number of patients handled per shift, and whether or not COVID-19 patients were handled. The questionnaire also included two validated scales for evaluating anxiety and reactions to the acute stress caused by entering employment during the COVID-19 pandemic: the Zung Self-Rating Anxiety Scale (Zung, 1971; Appendix 1) and the Stanford Acute Stress Reaction Questionnaire (SASRQ; Cardeña et al., 2000; Appendix 2). These scales have been previously used in professionals caring for patients with COVID-19, obtaining

TABLE 1 Ad hoc questionnaire.

Dichotomous questions with yes/no answers

1. Do you think that the clinical placements for the degree programme should have been suspended?
2. Do you think that the university handled the situation of nursing students appropriately?
3. Have you received any kind of specific information about protection from contagion?
4. Do you think that you have access to the necessary protective measures to work safely?
5. Have you been afraid of contagion while working?
6. Have you been afraid of infecting your family members or the people you live with?
7. Do you think you have sufficient knowledge to cope with this professional situation?
8. Have you received support from any institution?
9. Have you felt welcomed by your colleagues in the professional setting?

Open-ended questions

Please state the positive and negative aspects of the suspension of clinical placements.

Please state the positive and negative aspects of entering employment before completing your degree and during a public health crisis.

How is the situation affecting you emotionally?

What would you need to improve the situation?

Cronbach's alpha for internal consistency of .821 for the Zung Self-Assessment Anxiety Scale and .837 Cronbach's alpha for SASRQ (Xiao et al., 2020).

The Zung Self-Rating Anxiety Scale (Zung, 1971) features 20 items relating to different symptoms of anxiety, most of which are somatic in nature. Patients score the frequency of these symptoms from 1 (never or almost never) to 4 (always or almost always). The total score on the scale indicates whether anxiety is moderate (45–59), severe (60–74), clinically significant (75 points or over) or absent (below 45 points).

The Stanford Acute Stress Reaction Questionnaire (SASRQ; Cardeña et al., 2000) was developed to measure anxiety and dissociative symptoms in people who have experienced traumatic events, in accordance with the criteria for acute stress disorder in DSM-IV. A specific time period is set and respondents are asked to describe their most disturbing experience during this period, as well as the degree of disturbance that it provoked. The 30 items on the questionnaire are then scored according to the frequency of the different symptoms and discomforts deriving from the experience. Finally, respondents are asked to state the number of days during the time period when they experienced these symptoms or discomforts.

3.3.2 | Qualitative phase

Eighteen semi-structured interviews were held via videoconferencing due to the restrictions imposed during the pandemic. A script containing open questions that was drawn up in advance of the interviews was used (Appendix 3) to explore and explain the questions from the quantitative phase in greater depth.

The interviews were conducted by four authors, who were researchers and lecturers at the nursing department of the different universities. The mean duration of the interviews was 50 min and was adapted to suit the times and dates chosen by the participants, creating an atmosphere of confidentiality and comfort. The interviews were conducted in the participants' chosen language (Spanish or Catalan) and were audio-recorded before being transcribed for subsequent analysis. Field notes were also taken during and after the interviews.

3.4 | Ethics considerations

Only students who had read the conditions and agreed to participate in the study were permitted to complete the questionnaire.

Permission was obtained from the three universities, and the study was approved by the Research Ethics Committee at the XX University. The participants in the qualitative phase signed an informed consent form sent by email before the start of the interview. They were also asked for permission to audio-record the interview. Once the interviews had been transcribed, the audio recordings were destroyed and the transcriptions anonymised.

3.5 | Data analysis

3.5.1 | Quantitative phase

Two of the authors categorised and reduced the answers to the open-ended questions to new variables. Descriptive statistics were used to summarise the data, as frequency and percentage for the categorical variables and as mean and standard deviation for the quantitative variables. The chi-squared statistical test was used to assess differences between the three universities for the categorical variables analysed. For variables where the expected cell size was <5, Fisher's exact test was used. A significance level of 5% was considered throughout the analysis. The statistical analysis was carried out using SPSS 23.0 for Windows.

3.5.2 | Qualitative phase

The verbatim transcriptions of the interviews were imported into the qualitative analysis software used by the researchers (Open Code, Nvivo, and Atlas ti). The analysis was initiated during data collection. Following a constructive approach, the data were analysed using the guidelines to reflexive thematic analysis provided by Braun and Clarke (2021). Firstly, based on the interview script and study objectives, four of the researchers produced a preliminary coding tree to help identify units of meaning or parts of the text relating to the same theme. Secondly, open codes summarising the content were then assigned to units of meaning. The resulting set of codes was compiled in an Excel file. Each of the researchers then reviewed and made an approximate division and subdivision of the code set based on similarities, which were discussed among them. Once the code sets were agreed upon, two of these researchers arranged them and identified the categories, which were again discussed among all the researchers involved in the analysis.

Once the quantitative and qualitative data had been analysed, the results were compared and combined. As the categories resulting from the qualitative analysis were related to the preliminary analysis groups based on the interview script and the themes of the questionnaire, the responses from the quantitative data were adjusted to the categories created in the qualitative analysis, supplementing their content and providing a better understanding of the data.

3.6 | Validity and reliability/rigour

Credibility, transferability and confirmability were used as quality criteria to guarantee the rigour of the research process. Given that the researchers had extensive experience in the use of qualitative methodologies, credibility was strengthened, as the study design, the selection and approach to the context and participants, and the data processing were conducted in a sound manner. The main differences in quantitative responses between regions focused on the types of contracts and the characteristics of the healthcare

provided, rather than on the mental health part of the experience. This also helps to reinforce the confirmability of the qualitative results, which include verbatim descriptions that support the content of each category. In terms of transferability, although a detailed description of the context has not been provided in order to preserve the anonymity of the universities and participants, given the similarities of the results compared to the literature on the topic in different settings, the reader can decide whether or not the results are transferable to other specific contexts based on the wealth of information provided.

Pair coding was employed and the researchers who created the codes met to discuss differences and resolve any discrepancies that arose. In this way, the coherence of the data and categories was discussed with the whole research team involved in the analysis.

Data triangulation was used to improve the validity and reliability of the research, gathering information from nursing students at different universities in different geographical regions to obtain multiple perceptions of the same reality. Methodological triangulation was also used to contrast and supplement the results obtained using quantitative and qualitative instruments.

4 | RESULTS

In the quantitative phase, 92 students from the three universities (X, Y, Z) who had started working as healthcare assistants responded to the questionnaire (42.6% of the respondents). All students who had completed their theoretical training and had only their bachelor theses and practical training to complete were invited to participate. As a result, third-year students of the Nursing degree ($n=7$), fourth-year students of the Nursing degree ($n=81$), and fifth-year students of the Nursing and Physiotherapy degree ($n=4$) participated in this phase. In the qualitative phase, 18 of these participants were interviewed (13 women and 5 men). The participants had a median age of 21 (age range: 23–21). Table 2 shows the composition of the total sample ($n=92$) and of the participants for the qualitative interviews ($n=18$).

The overall results were organised into five categories: (1) Interruption of clinical placements, (2) Entering employment on a healthcare assistant contract, (3) Preventing contagion, (4) Adapting to the situation and managing emotions, and (5) Lessons learned.

4.1 | Interruption and suspension of clinical placements

72.8% ($n=67$) agreed with the suspension of the clinical placements. The positive impacts of the interruption of the clinical placements identified by the students were as follows: protecting students/preventing contagion/preventing them from becoming vectors of contagion (51.1%, $n=47$); having more time to dedicate to their bachelor theses, work/study and/or preparation for the Resident Nursing Intern (EIR) examinations (22.8%, $n=21$); and avoiding putting family members or cohabitants at risk (9.8%, $n=9$).

Among the negative impacts of the suspension of the clinical placements, 76.1% ($n=70$) highlighted the loss of opportunities to acquire relevant knowledge, skills and experience of providing care, followed by uncertainty (16.3%, $n=15$), and the academic work that they were required to complete to pass the clinical placement (16.3%, $n=15$).

52.2% ($n=48$) of the participating students believed that the university had handled the situation appropriately, while 47.8% ($n=44$) considered the university's management to have been inadequate. They stated that they would have preferred more information about what was happening and that communication should have been more fluid and direct to avoid uncertainty (21.7%, $n=20$).

The qualitative data showed that students considered the suspension of the planned clinical placements to have been too sudden, giving rise to uncertainty regarding the possibility of graduating that year after failing to complete the number of clinical credits required under current legislation. This uncertainty was heightened or diminished depending on the flow of communication between the students and the university. Meanwhile, being unable to complete their clinical placements in the planned units was viewed as an obstacle to the students' training, especially for those who were scheduled to complete their placements at specialist departments such as Critical Care Units, Operating Theatres or Emergency Departments. In addition to the suspension of clinical placements, the conditions in which the students would complete their bachelor theses were another source of concern.

It's like we've completely slowed down; it makes you feel uncertain about the future too, not knowing what will happen; or when we didn't know at the beginning if we'd graduate in June or what would happen with our bachelor theses. In the end, it makes you

TABLE 2 Composition of the sample of participants.

	Participants in the quantitative phase			Participants in the qualitative phase		
	Total	Women	Men	Total	Women	Men
University X	23	22	1	7	7	0
University Y	24	17	6	6	4	2
University Z	45	38	7	5	4	1

feel really tense and uncertain, a bit overwhelmed sometimes...

(E2, Y)

4.2 | Nursing students' entry into employment

The decision to begin working in health care earlier than planned in the midst of a pandemic may be explained by students' sense of moral responsibility. After completing the majority of their academic training, they believed that they could make an active contribution ('help') to this critical public health emergency.

As soon as the pandemic and the public health crisis began, because I saw that I could, I wanted to help because I felt that I could make a contribution and that many people wanted to help and couldn't. Having studied, well, being in the middle of studying for this degree, I felt that I needed to help and that I couldn't stay at home all day writing my bachelor thesis and watching stuff on TV constantly about the health crisis that was happening

(E3, X)

Table 3 shows the conditions in which the participants entered employment.

4.2.1 | Recruitment

Of the 92 students who entered employment in the clinical setting, 51.1% ($n=47$) were notified 1 day before starting work, while 29.3% ($n=27$) received at least 1 week's notice. 83% had started work more than 15 days before the study began. The duration of the temporary contracts they had been offered ranged from contracts by days to contracts lasting until the end of the state of emergency.

Yes [I started work before signing the contract]; actually, I signed the contract quite late, after about two weeks or something like that.

(E3, Y)

I felt a bit hesitant about working without signing the contract [...] I spent about two days in limbo, but I also found it reassuring to see what I was going to come up against before signing or officially committing to the job

(E5, X)

53% ($n=44$) were offered contracts as healthcare assistants or nursing assistants, while others signed (47%, $n=39$) as nurses or assistants. 66.7% of the participants at X and 60% at Y were recruited as healthcare assistants, while the most common role at Y was that of nurses (50.0%). These differences are statistically significant ($p=.046$).

4.3 | Working conditions

The departments where students worked ranged from inpatient wards to medicalised hotels, field hospitals, Critical Care Units, Emergency Departments, COVID-19 screening facilities and mental health units.

The quantitative data show significant differences ($p=.004$) between universities in terms of the departments where students worked: Medicalised hotels were the most common facilities recruiting students from X (23.8%), nursing homes from Y (52.4%) and inpatient wards from Z (57.5%).

So, I went to the medicalised hotel in (location) and I went to speak to the supervisor. She explained everything and told me: "OK, you can start tomorrow"

(E3, X)

The majority of the participants (56.6%) from the three universities provided support to another nurse. This difference was statistically significant ($p=.029$). However, 40.9% of the students at Y were fully responsible for the patients in their care. In the interviews, the students described a variety of situations in which their involvement depended on the facility's workload, ranging from providing support to other nursing professionals to taking on nursing work without direct supervision.

It was just supporting the nursing staff, staying in the corridors to offer help if the nurses had to do a test on the patients, maybe you'd hold the bag so that they could insert the tubes or change a diaper, you'd pass them things from the corridor to the room so that they didn't have to leave the room all the time and remove their PPE (personal protective equipment)

(E10, X)

The first week at the hospital, I did work as an assistant, but... in the end, I spent three days doing the work of a nurse. I remember that worried me quite a lot because I knew that my contract didn't include those tasks

(E5, Z)

In situations of excess workload, students were asked to carry out tasks unsupervised, taking full responsibility for the care of patients, some of whom had COVID-19. When the workload was lower, nursing professionals attempted to protect the students as far as possible by avoiding direct exposure to patients with COVID-19.

I got dressed, I went in and they said: 'Look. These two patients will be yours, they're pretty easy'. You're listed as a nurse so they keep an eye on you but your patients are your patients

(E13, X)

TABLE 3 Characteristics of participants' entry into employment by university^b.

		Total	Univ. X, n (%)	Univ. Y, n (%)	Univ. Z, n (%)	Lost to follow-up	p ^c
Entered employment in health care before completing their degree	Total	92	23 (25%)	24 (26.1%)	45 (48.9%)	0	–
	Men	14	1	6	7	1	
	Women	77	22	17	38		
	No response	1	–	1	–		
Time spent in employment	1–6 days	6 (7.4%)	1 (4.8%)	5 (25%)	–	11	.001
	7–14 days	7 (8.6%)	–	4 (20%)	3 (7.5%)		
	15 days to 1 month	14 (17.3%)	2 (9.5%)	1 (5%)	11 (27.5%)		
	More than a month	54 (66.7%)	18 (85.7%)	10 (50%)	26 (65%)		
Role indicated on contract	Nursing assistant	16 (19.3%)	3 (14.3%)	5 (22.7%)	8 (20%)	9	.046
	Nurse	23 (27.7%)	4 (19.0%)	11 (50.0%)	8 (20.0%)		
	Healthcare assistant	44 (53%)	14 (66.7%)	6 (27.3%)	24 (60%)		
	No response	9	2	2	5		
Department	Medicalised hotels	6 (7.32%)	6 (23.8%)	1 (4.8%)	–	10	.004
	Field hospitals	1 (1.22%)	–	–	1 (2.5%)		
	ICU	8 (9.76%)	2 (9.5%)	1 (4.8%)	5 (12.5%)		
	Emergency Dept.	4 (4.88%)	1 (4.8%)	–	3 (7.5%)		
	Inpatient ward ^c	4 (51.21%)	11 (52.4%)	8 (38.1%)	23 (57.5%)		
	Other healthcare facilities ^a	21 (25.61%)	2 (9.5%)	11 (52.4%)	8 (20%)		
	No response	10	2	3	5		
Provided care for confirmed or suspected COVID-19 patients	Yes	70 (84.3%)	19 (90.5%)	16 (72.7%)	35 (87.5%)	9	.464
	No	10 (12.0%)	1 (4.8%)	5 (22.7%)	4 (10%)		
	Other	3 (3.6%)	1 (4.8%)	1 (4.5%)	1 (2.5%)		
	No response	9	2	2	5		
Type of work	Support for other nurses	47 (56.6%)	11 (52.4%)	10 (45.5%)	26 (65.0%)	9	.029
	Full responsibility for patients	20 (24.1%)	2 (9.5%)	9 (40.9%)	9 (22.5%)		
	Other	16 (19.3%)	8 (38.1%)	3 (13.6%)	5 (12.5%)		
	No response	9	2	2	5		
Received specific information on protection from contagion	Yes	34 (42%)	12 (57.1%)	8 (40%)	14 (35%)	11	.245
	No	47 (58%)	9 (42.9%)	12 (60%)	26 (65%)		
	No response	11	2	4	5		
Had access to necessary protective measures	Yes	44 (54.3%)	12 (52.1%)	13 (65%)	19 (47.5%)	11	.759
	No	23 (33.3%)	7 (33.3%)	5 (25%)	15 (37.5%)		
	Other (yes, but not always/ sporadically)	10 (12.3%)	2 (9.5%)	2 (10%)	6 (15%)		
	No response	11	2	4	5		

(Continues)

TABLE 3 (Continued)

		Total	Univ. X, n (%)	Univ. Y, n (%)	Univ. Z, n (%)	Lost to follow-up	<i>p</i> ^c
Number of patients cared for per shift	<5 patients	6 (7.8%)				15 (16.3%)	.334
	6–10 patients	21 (27.3%)					
	11–20 patients	25 (32.5%)					
	21–30 patients	5 (6.5%)					
	31–40 patients	2 (2.6%)					
	41–50 patients	4 (5.2%)					
	51–60 patients	1 (1.3%)					
	61–70 patients	2 (2.6%)					
	>81 patients	4 (5.2%)					
	Support role, no specific patients in their care	2 (2.6%)					
Whole ward	5 (6.5%)						

^aNursing homes + COVID-19 screening facilities + mental health units.

^bUsed descriptive statistics: frequency and percentage for the categorical variables; mean and standard deviation for the quantitative variables. The chi-squared statistical test was applied to assess the differences between universities of the categorical variables. For those variables where the expected cell size was <5, Fisher's exact test was used.

^cA significance level of 5% was considered throughout the analysis.

I was meant to be providing general support to anyone who needed it, but that was impossible in practice because there weren't enough professionals to keep an eye on you. So, I asked about anything I didn't know, but I was quite independent.

(E3, Z)

In other cases, direct care for patients with COVID-19 fell entirely to qualified nurses and students were only asked to complete auxiliary tasks, reducing the risks to which they were exposed.

84.3% of the students ($N=70$) cared for patients with confirmed or suspected COVID-19, with no statistically significant differences between universities ($p=.464$). 56.6% ($n=47$) provided support to other nurses and 24.1% ($n=20$) had patients for whom they were solely responsible, while four students had full responsibility for patients only when there was a shortage of personnel or during the night shift, with the situation changing over time.

The students' workload varied: 27.3% ($n=21$) cared for 6–10 patients per shift, while 32.5% ($n=25$) cared for 11–20 patients per shift. The shifts ranged from 4 to 13 hours, although the majority (56.1%, $n=46$) were equal to or <7h.

4.4 | Support received

With regard to the support they received, 67% ($n=55$) of the students stated that they did not receive support from any institution. Those who had received support highlighted the role of their university in particular.

81.5% ($n=75$) had felt welcomed by their colleagues in the professional setting. They emphasised positive aspects such as a warm welcome to the team (37%, $n=34$), receiving help and advice (21.7%, $n=20$), and coordination between colleagues (10.9%, $n=10$). 8.7% ($n=8$) stated negative aspects such as the belief that students would increase the professionals' workload/were not useful (7.6%, $n=7$).

As the days went by, I got used to working at the hospital, because of my colleagues especially, who gave me a really warm welcome and supported me, so, in the end, it was good

(E2, Y)

4.5 | Consequences

Among the 19 negative aspects identified in relation to students entering employment before completing their degrees and during a public health crisis, the participants highlighted the lack of legal backing/lack of membership of an official nurses' association (17.4%, $n=16$); temporary contracts with poorly defined roles (17.4%, $n=16$); fear (17.4%, $n=16$); uncertainty, anxiety, stress and lack of psychological preparation (18.5%, $n=17$); lack of confidence and knowledge due to the failure to complete training (14.1%, $n=13$); and risk of catching the disease or of infecting others (9.8%, $n=9$).

The qualitative data show that entering employment as a student on a healthcare assistant contract rather than as a nurse, receiving

inadequate information about their role and department or the type of patients they would be caring for, and having to start work before reading or signing the contract gave rise to mistrust and distress among the students. The participants described the way in which their recruitment was organised as chaotic, sudden and lacking safeguards on some occasions. They also missed the protection that they would have received from the Official Nurses' Associations had they entered employment in the health system as nurses rather than students. The students on healthcare assistant contracts explained that they were taking more responsibility than that stipulated in their contracts.

You have more responsibility than you're meant to be because you don't have an Official Nurses' Association to protect you or to provide legal support if you have a problem, and your salary doesn't correspond to your level of responsibility

(E13, X)

4.6 | Preventing contagion

42% ($n=34$) of the students did not receive any kind of specific training on protecting themselves from contagion. The types of training mentioned were explanations from hospital colleagues, university training, online searches on the students' own initiative and online courses. 45.7% ($n=42$) said that they had required specific information and training on the theory and practice of personal protective equipment (PPE; putting on and removing PPE).

The students who had received information on handling PPE had done so at different times in their entry into employment. However, they viewed the information they were given as inadequate or insufficient in terms of the content or timing. In some cases, informal training was provided by nursing colleagues at the department. In others, students missed out on training as they started work after the training had been offered.

In my view, the training I received on protecting myself from a disease that could kill me was a complete joke. I really don't think it's fair for us to receive such brief training given the situation we're going into. I'm talking about the hospital providing you with formal training then washing its hands of the matter, because your colleagues train you quite well

(E13, X)

We got to the hospital and they told us: 'you can start', without explaining the situation the hospital was in at the time and the protocols in place on how to protect ourselves

(E2, Y)

54.3% ($n=44$) thought that the protection measures in place were sufficient to allow them to work safely, although 26.1% ($n=24$) needed

more materials/more PPE/more gloves to avoid having to reuse them, 6.5% ($n=6$) complained of insufficient equipment, and 3.3% ($n=3$) observed ineffective PPE or PPE in poor condition.

I mean, mine do. I don't come into contact with any COVID patients, I'm given an FFP3 mask when I get to work. If I arrive tomorrow morning and they tell me there aren't any FFP3 masks or you have to wear a surgical mask, I'll say 'sorry, I'm going home'. I'm very clear on all of that. But I'm alright, the problem is that my colleagues, I don't know if you've seen on the news but the PPE is running out and they have to reuse it. There comes a point when they're wearing bin bags in the ICU

(E1, Y)

The PPE was the same as for all the patients, even when we didn't have much left. They told us we'd have to remove the PPE and put it on a hanger or hold it in case we needed it to go into the patient's room again to... there wasn't any more; so, we'd spray disinfectant on it, but there wasn't any more, we had no choice but to reuse it.

(E16, Z)

In situations in which the students had to provide care for patients with COVID, the use of PPE was perceived as stressful, especially when it came to removing it as incorrect handling carried a high risk of contagion. Sometimes, there was a lack of protective equipment. The participants also emphasised the after-effects of the use of PPE.

Then you had to be careful when taking it off [the PPE] because it was all dirty, so everyone would take it off in their own way, and me, in my training I was told I had to take it off like this, but then on the ward, they took it off a different way, and the first time I took the PPE off, I don't know how I didn't get COVID then and there. Because everyone was telling me something different. I took it off as best I could, as best I knew how. [...] The first time was really, really bad. I think I showered three times when I got home that day, just in case.

(E10, X)

4.6.1 | Strategies to avoid contagion

45.7% ($n=42$) of the students stated that they had experienced fear of contagion on some occasions, while 29.3% ($n=27$) experienced it frequently. Meanwhile, fear of infecting their relatives or cohabitants was 'always' present for 33.7% ($n=31$) of the students, and frequently present for 21.7% ($n=20$). The interviews showed that

the students were aware of the virus's potential to cause disease and death, as they had seen the consequences of infection for patients first-hand. Despite this, they did not tend to fear getting infected themselves as they viewed it as a risk inherent to the nursing profession; their main fear was acting as a vector of contagion for their family members. Overall, the students' fear of catching the disease themselves or infecting their families diminished over time as their confidence that they were applying protective measures correctly grew.

The interviews revealed the strategies used by the students to avoid contagion. These strategies were implemented from the very beginning. One example was 'using all six senses' when coming into contact with patients to avoid carelessness. Whenever the situation allowed, direct contact with patients was limited as much as possible by using other forms of communication that did not require face-to-face interaction and grouping together tasks involving direct contact with the patient to limit exposure. In departments where this was not possible (e.g. the ICU), they followed the established guidelines, maintaining a distance from patients, distributing tasks by contact time with patients and alternating these tasks with breaks. They also constantly disinfected the equipment and avoided contact with surfaces. In some ICUs, the students had less contact with patients and spent most of their time preparing medication.

Beyond the workplace, some participants stayed in a hotel for healthcare personnel or a flatshare with other nurses in order to keep a distance between them and their family members or co-habitants. They remained in these locations until the end of the lockdown out of fear of infecting vulnerable people in their households. Keeping clothing or shoes solely for the workplace, using gloves and protective equipment intended for the hospital setting outside it, and showering upon returning home were also common practices.

When I was working, I moved out of my home to avoid infecting my parents, just in case.

(E11, X)

I 'isolated' in the downstairs flat in my house in an attempt to cope with my fear of infecting my family, because that was almost the worst part of it all. More than the possibility of catching it myself, the idea of passing it on to them

(E5, X)

4.7 | Emotional management

The emotional impacts most commonly cited by the students were stress, with 25% ($n=23$), and anxiety, with 15.2% ($n=14$; Table 4). The overall anxiety levels were ($M=35.67$; $SD=5.78$), and the stress level was ($M=80.01$; $SD=28.92$).

TABLE 4 Symptoms of emotional distress identified among participants.

Variable	N	%
Stress	23	25
Anxiety	14	15.2
Overwhelm	8	8.7
Insomnia/difficulty sleeping	8	8.7
Excessive empathy with patients and/or family members	8	8.7
Sadness	7	7.6
Fear	5	5.4
Fatigue	5	5.4
Uncertainty	4	4.3
Concern for own family	4	4.3
Despondency	4	4.3
Irritation/frustration	3	3.3
Concern over situation and future	2	2.2
Powerlessness	2	2.2
Anger	2	2.2
Overload	2	2.2
Loneliness	1	1.1

4.7.1 | Anxiety

33.7% ($n=31$) felt more nervous and anxious than usual sometimes, while 28.3% ($n=26$) felt this way quite frequently. 34.8% ($n=32$) experienced palpitations, 13.0% ($n=12$) dizziness, 31.5% ($n=29$) stomach aches or indigestion, 20.7% ($n=19$) high urinary frequency, 23.9% ($n=22$) dry and warm hands, 25.0% ($n=23$) face flushing, and 30.4% ($n=28$) nightmares. In the interviews, the students mentioned having problems falling asleep.

Emotionally, it does affect you to some degree. I've had trouble sleeping sometimes, I've had nightmares, I don't know, not many, but since I joined the ICU especially, I've seen things that I don't like seeing, but I mean, that's also because I'm new there.

(E3, X)

4.7.2 | Stress and emotional exhaustion

With regard to stress, 54.4% ($n=50$) of the participants felt worried frequently or very frequently. Other frequent or very frequent symptoms were sleeping (29.4%, $n=27$) and concentration difficulties (26.1%, $n=24$). 27.2% ($n=25$) experienced these symptoms for 5 days or more. The interviews revealed that, especially in the first few weeks after starting work, the students reported suffering stress and feelings of powerlessness as a result of their excessive workload. This was exacerbated by personnel shortages, the

complexity of the patients' conditions, the need to group interventions and adopt new habits, and numerous instances of therapeutic failure.

I found the whole situation of being distanced from the patients and not being able to offer the support we usually give them stressful.

(E2, Y)

At the start, it was more or less OK but you also have that stress, a bit more emotional stress because of what's happening, because of the situation, because you're there at the hospital... So there came a point when, if I had to work seven or eight days in a row, five or six, however many, in the end there came a point when I was a bit physically and mentally tired.

(E7, Y)

4.7.3 | Emotional distress

The students experienced distress and sadness at the solitude and isolation that they perceived patients to experience in hospital, as well as after witnessing patient deaths.

Seeing that really affects you, when you see your first [cardiorespiratory] arrest, because I'd never seen an arrest with CPR and the first one was a very, very young girl who didn't make it in the end; so for me, that case in particular, as always, it really got in my head, it really got under my skin, so I was still processing that a bit emotionally.

(E15, X)

Of course, it's tough seeing people go to say goodbye to someone, their wife going to say goodbye and then her being admitted too. When the children come, you have to prepare them, dress them in PPE, all that to go and say goodbye, you say 'Damn. It's really cold-hearted having to use all the protective equipment, the masks, the coveralls, the goggles...' But it's the situation we have to deal with.

(E 18, Y)

Having to wear something over the top, having to face up to difficult situations, having to be so careful, not being able to approach people because no matter how much protection you have you're still afraid of getting infected, so you don't want to get too close but you also don't want to be too distant because, hell, they're alone. You know? And you want to show them a bit of affection but you also

have to look out for yourself. [...] I don't know, there were a lot of mixed feelings.

(E 11, X)

The participants also mentioned their anger at witnessing irresponsible behaviour from the general public, who appeared not to be aware of the consequences of their actions as they contravened public health recommendations and put themselves at risk. They believed that these behaviours could give rise to further situations such as those that they had experienced at the hospitals, which stayed with them even after the end of the working day. Participants whose loved ones had had COVID experienced an even greater sense of fear.

The new habits adopted by the participants to prevent contagion, such as washing when arriving home or avoiding physical proximity with their cohabitants, required a process of adaptation and provoked emotional distress.

It was like, if you were on the sofa, you'd sit in a corner to keep a distance just in case. Even though I was 70% certain that I'd already had it and him [my father] too and that I'd disinfected everything well, I didn't want to get too close to him just in case.

(E11, X)

When you got out of work, you felt like... 'have I done it all properly? Am I clean enough to leave and go home?' You had those doubts and that uncertainty of not knowing what you had on you. When I got home, I'd take off all my clothes in the entrance, put them in the wash and head straight to the shower. In the first few days, I had those fears [...] as the days passed, I knew I was doing it right. So I'd get home and I wouldn't have that same fear as I walked inside.

(E6, Z)

At the start especially, it was really tough because I was living at home with my parents and my brother and I had to come here and I was alone, the uncertainty of not knowing when I would see them again, being here alone, having to organise everything myself, it was difficult, but oh well...

(E2, Y)

4.7.4 | Satisfaction

The participants also reported positive emotions aroused by perceived gratitude from patients. The fact that the people they were caring for were so dependent on their care enhanced their sense of capability and responsibility.

The positive aspect was that I feel really proud now thinking that I was able to contribute in some way, no matter how small, to improving this situation

(E5, X)

I mean, I'd go home feeling grateful for having the opportunity to work in this situation that we've been thrown into and for being able to help. I felt good about myself

(E3, X)

Then, as well as getting involved, after watching on TV the whole time we were there, all the healthcare professionals' work, and from the first day, I started work at 8:00 but I got out at 20:00 and I saw the first round of applause. Oh my God, I just started crying. I thought 'this can't be happening': the people in the flats opposite were coming out onto the balconies and yeah, it was really emotional, so I was already affected by the situation in my head, because you were seeing it from the outside and then suddenly you're seeing it from the inside

(E13, X)

4.8 | The transition to professional life: Lessons learned

Among the positive aspects of entering employment before completing their degrees and during a public health crisis, the students highlighted: acquiring greater experience and knowledge (28.2%, $n=61$), pride at having been able to help (7.9%, $n=17$), and team spirit (4.2%, $n=9$), followed by greater responsibility and autonomy (3.7%, $n=8$), improved self-confidence (3.2%, $n=7$), and greater emotional resilience (2.8%, $n=6$).

In professional terms, the students felt very proud of their contribution to improving public health and their patients' conditions. Once they had finished working as healthcare assistants, they perceived an improvement in their nursing skills as they had delivered care under constant pressure and their ability to care for critical patients had increased. In addition, their capacity to manage the emotions deriving from their work had improved and they had been able to reflect on the ethical dilemmas they faced during that time. Although they did not forget the stressful circumstances in which they learned these lessons, some students found the knowledge that they acquired during their experience as healthcare assistants positive, as their work represented a continuation of their supervised clinical placements, while offering a greater degree of responsibility for patients. This allowed them to gain confidence in their role as nurses, consolidating knowledge of complex care and improving their ability to build relationships with patients or their team.

Now, when my classmates start work they're really nervous, as I would be too in that situation, and now I think 'if I can do it, so can they'. Even so, now, when I start work as a nurse, I think it's going to be even worse because I knew that I had responsibilities but there was always a legal loophole – you hire me as an assistant and have me working as a nurse – to back me up if necessary, but not anymore. Now you're 100% responsible by law

(E8, X)

It was work experience that we got early on and that you don't get from the clinical placements, even if you do an extra year; what I got out of that month, I'd never have got it any other way. I mean, I've done real work without a nurse supervising me. I've seen what it's really like to work as a nurse.

(E1, Y)

I think starting work amid the madness of a public health crisis has been very positive for me professionally, because ultimately you can see how you perform. [...] It's also been positive because I've learned a lot and I've been able to really get involved.

(E3, Z)

5 | DISCUSSION

This study has shown that during the first wave of the COVID-19 pandemic from March to May 2020, the participating nursing students began to work in healthcare settings, mostly on healthcare assistant contracts, out of a desire to help in this emergency situation. Although they had a positive experience in terms of professional training, there was also a significant emotional impact in the form of anxiety, stress and worry caused by uncertainty over completion of the academic year, lack of information about their contracts and responsibilities, and the possibility of infecting their family members.

The participants perceived an improvement in their nursing skills after entering employment, as well as an increase in their confidence and knowledge of complex care. Their experience also enabled them to handle different moral and ethical dilemmas (Bosveld et al., 2021) and to carry out tasks related to critical or dying patients, which they had never experienced previously, which is a critical aspect of nursing practice. As reported in our results, recent studies have explored the experiences of nursing students recruited as healthcare assistants in Spain, highlighting the value of this period in allowing them to gain clinical experience and build self-confidence in conditions where they had less professional responsibility (Casafont et al., 2021; Velarde-García et al., 2021), as well as the emotional intensity of the experience, which aroused ambivalent emotions such

as pride, sadness, anger, and powerlessness, with fear and uncertainty being the most prevalent feelings (Collado-Boira et al., 2020). Studies in different settings emphasise that allowing students to work in healthcare settings during a pandemic can have a beneficial effect on the formation of their professional identity (Bank & Wijnen-Meijer, 2020), as well as reinforcing their sense of professional belonging and increasing their feelings of pride and privilege at having been able to help (Gómez-Ibáñez et al., 2020).

Nurses' professional identity is linked to the motivation and vocation to help others. Therefore, during the pandemic, students wished to make a significant contribution to patient care and support frontline healthcare personnel (Bank & Wijnen-Meijer, 2020). To do so, they had to choose between their professional and ethical commitment and their risk of infection (Eweida et al., 2020), weighing up the risks and benefits of working on COVID wards. Despite their good will, they may have felt some degree of pressure to support efforts to provide health care during the COVID-19 pandemic (Swift et al., 2020). Like in our results, some studies in European settings suggest that the COVID-19 pandemic has shown that students can take more responsibility (albeit under supervision) in caring for patients at the start of their clinical placements (Bosveld et al., 2021). In addition, excessive workload on the part of the person allocated to supervise them may put the student, their colleagues and patients at risk (Bank & Wijnen-Meijer, 2020).

Several studies have shown that, among Health Sciences students, the fear of infecting people close to them was greater than their fear of catching the disease themselves (Cervera-Gasch et al., 2020; Cici & Yilmazel, 2020; Eweida et al., 2020; Gómez-Ibáñez et al., 2020), which is corroborated by this study. As in other contexts, not having the necessary equipment considerably increased stress levels among the students (Ersin & Kartal, 2020), as did their lack of perceived competence in handling protective clothing (Bank & Wijnen-Meijer, 2020). The fact that half of the nursing students perceived the protective measures available to them as sufficient in protecting themselves from contagion may owe to their role primarily being as healthcare assistants, which placed them on the second line of care for infected people (or made it more likely that they would not be on the frontline).

Like the participants in this study, other Spanish nursing students expressed fear and anxiety in the first few days after starting work, uncertainty regarding their roles and responsibilities, insecurity, and lack of confidence in their professional abilities (Gómez-Ibáñez et al., 2020). The participants expressed uncertainty due to the lack of information about their contracts and responsibilities, the lack of supervision, and the lack of specific training on safety aspects. These experiences and uncertainty had an impact on their health, giving rise to physical (sleep disturbances) and emotional (stress, anxiety, fear) issues similar to those reported in other national (Obando Zegarra et al., 2020) and international studies (Cici & Yilmazel, 2020; Eweida et al., 2020; Savitsky et al., 2020). The results also showed that the students' uncertainty and fear diminished over time (Gómez-Ibáñez et al., 2020; Ramos-Morcillo et al., 2020).

In other countries, such as China, nursing students showed 34.97% prevalence of anxiety (nearly 8% of students reported moderate or severe anxiety), 40.22% prevalence of depression (more than 12% reported moderate or major depression) and 4.97% prevalence of post-traumatic stress during the pandemic (Li et al., 2021). Another study in the country also found that health students reported higher levels of anxiety compared to students in other university degrees (Yang et al., 2021). However, a study conducted in Saudi Arabia (Alsolais et al., 2021) found that nursing students reported some degree of depression, anxiety and stress. In turn, a qualitative analysis of tweets from nursing students in the United Kingdom, the United States and South Korea (De Gagne et al., 2021) indicated that emotions such as stress, fear, anxiety and uncertainty about their academic future were more directly communicated as time progressed, confirming that the pandemic was associated with student distress.

In order to alleviate the psychological effects described, several studies have highlighted the need to prepare students via psychological training programmes and to develop support systems for future work in pandemic circumstances (Cici & Yilmazel, 2020; Eweida et al., 2020), with a particular focus on training in resilience (Lorente et al., 2020; Savitsky et al., 2020; Umeda et al., 2020) and the importance of self-care in enabling care for others (Pérez-Moreno et al., 2020). With regard to the strategies used by students to cope with the situation, psychological distress was mitigated by the adoption of self-care practices and physical exercise (Gallego-Gómez et al., 2020).

5.1 | Implications

In the current context, it has become particularly important to cover epidemics and pandemics in greater depth in study programmes, as well as to provide more extensive training equipping students with knowledge and skills relating to caring for patients with COVID-19 (Bosveld et al., 2021). Adequate preparatory learning and training in knowledge and skills relating to caring for patients with COVID-19, provision of all necessary PPE, adequate insurance and appropriate economic compensation for students' efforts are prerequisites for students in the healthcare professions to begin working in healthcare settings (Bosveld et al., 2021). Training on emotional aspects such as resilience is also important in enabling students to cope better with similar situations in the future (Lorente et al., 2020; Umeda et al., 2020).

5.2 | Limitations

This study has a series of limitations. The sampling technique used for the quantitative part could have affected the representativeness of the participants, since, by not using a random sample, students who voluntarily decided to participate may have been partly motivated to do so due to higher or lower levels of affect than the other

students. However, the three universities were selected on the basis that they were located in autonomous regions where students had begun working in healthcare settings, in order to obtain a broader sample with some degree of geographical representativeness, unlike other studies conducted in the Spanish context, which focused on a single region (Casafont et al., 2021; Gómez-Ibáñez et al., 2020; Ramos-Morcillo et al., 2020).

The fact that the interviewers were lecturers may have introduced some degree of social desirability bias among the interviewees, especially during the qualitative phase. To mitigate this effect, the interviews were carried out by lecturers who did not have a direct academic relationship with the students at that point in time.

As the data collection process took place between March and May 2020, the students' accounts were gathered very near the start of their employment. It would be interesting to analyse the consequences for mental health in the medium and long term, as well as the impact on the professional careers of the students who had their first experience of work during the pandemic.

6 | CONCLUSIONS

During the first wave of the COVID-19 pandemic, nursing students played a part in providing health care and showed great professionalism. Allowing students in the final years of their degrees to enter employment in healthcare settings, as healthcare assistants in particular, was beneficial for their training in responding to public health crises, for fellow nurses who received support amid a shortage of qualified personnel, for the rest of the healthcare team, and for patients themselves, who had a larger number of nursing professionals to care for them in a context of significant shortages. Although the students' attitude is praiseworthy and indicative of their professionalism, universities have a moral and legal duty to protect their students' health and wellbeing, as well as to deal with the emotional consequences of this work for nursing students.

7 | RELEVANCE TO CLINICAL PRACTICE

Considering the current worldwide situation, a more extensive coverage of epidemics and pandemics must be included in healthcare degree study programmes. In addition, emotional aspects such as resilience should also be reinforced to ensure that nursing and healthcare degree students, and then as professionals, are able to cope better potential epidemic and pandemic clinical situations in the future.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and participated substantially in at least one of the following steps: Conception and design of the study; data collection, analysis and interpretation; drafting the article and revising it critically.

ACKNOWLEDGEMENTS

The authors would like to thank the students who participated in the study for their time and sharing their experiences.

FUNDING INFORMATION

The authors disclosed receipt of financial support for the development of this study from the 29th edition of the prize Josep María Camps Balagué, sponsored by 'Colegio oficial de enfermeras y enfermeros de Lleida'. Open Access funding provided by University of the Basque Country (UPV/EHU).

CONFLICT OF INTEREST STATEMENT

No conflict of interest has been declared by the authors.

DATA AVAILABILITY STATEMENT


The data that support the findings of this study are available from the corresponding author (IPU), upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Robledo-Martín, J., Acea-López, L., Pérez-Urdiales, I., Alcolea-Cosín, M. T., Bellón, F., Oter-Quintana, C., Blanco-Blanco, J., Pastor-Bravo, M. d. M., Rubinat-Arnaldo, E., & Briones-Vozmediano, E. (2023). From students to nurses under pressure: Nursing students' entry into employment during the first COVID-19 wave. *Journal of Clinical Nursing*, 00, 1–18. <https://doi.org/10.1111/jocn.16800>

APPENDIX 1

The Zung Self-Rating Anxiety Scale (1971)

	None OR A little of the time	Some of the time	Good part of the time	Most OR All of the time
1. I feel more nervous and anxious than usual				
2. I feel afraid for no reason at all				
3. I get upset easily or feel panicky				
4. I feel like I'm falling apart and going to pieces				
5. I feel that everything is all right and nothing bad will happen				
6. My arms and legs shake and tremble				
7. I am bothered by headaches, neck and back pains				
8. I feel weak and get tired easily				
9. I feel calm and can sit still easily				
10. I can feel my heart beating fast				
11. I am bothered by dizzy spells				
12. I have fainting spells or feel like it				
13. I can breathe in and out easily				
14. I get feelings of numbness and tingling in my fingers, toes				
15. I am bothered by stomach aches or indigestion				
16. I have to empty my bladder often				
17. My hands are usually dry and warm				
18. My face gets hot and blushes				
19. I fall asleep easily and get a good night's rest				
20. I have nightmares				

APPENDIX 2

The Stanford Acute Stress Reaction Questionnaire (SASRQ) (2000)

- Description of the event
- How disturbing was this event to you?
 - 0. Not at all disturbing
 - 1. Somewhat disturbing
 - 2. Moderately disturbing
 - 3. Very disturbing
 - 4. Extremely disturbing

1- Not experienced

2- Very rarely experienced

3- Rarely experienced

4- Sometimes experienced

5- Often experienced

6- Not experienced

1 2 3 4 5 6

1. I had difficulty falling or staying asleep

2. I felt restless

3. I felt a sense of timelessness

4. I was slow to respond

5. I tried to avoid feelings about the stressful event

6. I had repeated distressing dreams of the stressful event

7. I felt extremely upset if exposed to events that reminded me of an aspect of the stressful event

8. I would jump in surprise at the least thing

9. The stressful event made it difficult for me to perform work or other things I needed to do

10. I did not have the usual sense of who I am

11. I tried to avoid activities that reminded me of the stressful event

12. I felt hypervigilant or 'on edge'

13. I experienced myself as though I were a stranger

14. I tried to avoid conversations about the stressful event

15. I had a bodily reaction when exposed to reminders of the stressful event

16. I had problems remembering important details about the stressful event

17. I tried to avoid thoughts about the stressful event

18. Things I saw look different to me from how I know they really looked

19. I had repeated and unwanted memories of the stressful event

20. I felt distant from my own emotions

21. I felt irritable or had outbursts of anger

22. I avoided contact with people who reminded me of the stressful event

23. I would suddenly act or feel as if the stressful event was happening again

24. My mind went blank

25. I had amnesia for large periods of the stressful event

26. The stressful event caused problems in my relationships with other people

27. I had difficulty concentrating

28. I felt estranged or detached from other people

29. I had a vivid sense that the stressful event was happening all over again

30. I tried to stay away from places that reminded me of the stressful event

- On how many days did you experience any of the above symptoms of distress?
 - No days
 - One day
 - Two days
 - Three days
 - Four days
 - Five or more days

APPENDIX 3**Interview script**

1. What year of your degree are you in currently?
2. With regard to the situation caused by the COVID-19 pandemic, please tell us about the entire process from the suspension of the clinical placements in a linear manner: when they called you to start working, when you signed the contract, the department you joined, and what the experience was like.

Themes to explore (check that they emerge in the explanation and, if not, ask about them specifically):

- Type of contract
 - Whether or not the department they worked in was related to COVID-19
 - Whether or not they had full responsibility for patients or provided support to other nurses
 - The tasks they carried out at work
 - The training and knowledge they required to cope with the situation, such as use of PPE.
 - The relationship with their colleagues/their welcome to the department
 - Fear of contagion and infecting others
3. How has it affected you personally and emotionally?
 4. What do you think are the negative aspects of entering employment before completing your degree and during a public health crisis?
 5. What are the positive aspects?
 6. What lessons have you learned for the future?
 7. How do you think the situation could have been better managed?
 8. Is there anything else you would like to add about the handling of the crisis?