Experiences of intensive care unit nurses with COVID-19 patients

ABSTRACT

Objective: To understand the experiences of intensive care unit nurses who provide care to patients with COVID-19. Methods: Qualitative study grounded in Alfred Schütz’s social phenomenology in which 20 nurses who work in intensive care units at public and private hospitals were interviewed between July and September 2020. Data were analyzed according to the adopted theoretical-methodological framework and the literature related to the subject. Results: The interviewed nurses mentioned demands about working conditions, professional recognition and training, and support to physical and mental health, which proved necessary considering the care intensity experienced by these professionals during the COVID-19 pandemic. Conclusion: Learning the nurses’ experiences evidenced the need to adjust to a new way of providing care that included the physical space, new institutional protocols, continuous use of protective equipment, and patients’ demand for special care. This originated the necessity to be around situations that interfered with their health and motivated them to carry out professional projects after the COVID-19 pandemic.

DESCRIPTORS

Coronavirus; Intensive Care Units; Critical Care Nursing; Stress, Psychological; Professional Practice.
INTRODUCTION

Nurses are professionals who are indispensable to care of critical patients, since they work uninterruptedly to keep these patients’ well-being and support for vital functions. As leaders of nursing teams, they prove themselves fundamental for the success of hospitalization and patient recovery(3).

Critical patients admitted to intensive care units (ICUs) demand a variety of interventions that involve use of advanced care technologies by nurses, high level of knowledge, attention, and specific skills. This care type is based on providing health support according to evidence of manifestation of signs and symptoms and use of invasive devices such as mechanical ventilators, hemodialfiltration, and medication administration(2).

The main reason to indicate intensive care to treat COVID-19 is the need for ventilation support, given that two thirds of the patients meet the criteria for severe acute respiratory syndrome, characterized by the acute establishment of hypoxemic respiratory failure with bilateral infiltrates(5).

In the context of care to COVID-19 patients and in face of the steep increase in its transmission, nurses have experienced unusual situations in their care routine in addition to having to have the skills to deal with the complexity inherent in this care modality. The anguish of making difficult screening decisions, fear of unknown aspects of the disease, pain caused by loss of patients and colleagues, and risk of infecting themselves and their relatives stand out(4).

Furthermore, there is the problem of increased workload together with lack of human and material resources, which increases wearing in these professionals(3). Exhaustion, both physical and mental, leads nurses to psychologically adjust to cope with the work routine, which includes the ability health team members have to support one another(6).

Finding out the meaning of the experienced reality from the perspective of nurses by having the intersubjective relationships they establish with COVID-19 patients in the physical and social setting of ICUs as the starting point can increase the visibility of the importance of these professionals in this care environment.

The development of the present study was guided by the following question: What is the experience of ICU nurses providing care to COVID-19 patients?

The objective of the present study was understanding the experiences of ICU nurses providing care to COVID-19 patients.

METHOD

STUDY DESIGN

This was a qualitative study grounded in Alfred Schütz’s social phenomenology. The intensity of the work routine experienced by nurses during the COVID-19 pandemic motivated the application of this theoretical-methodological framework as the basis of the present study, which offered the possibility of understanding the experiences of these professionals, who play a fundamental role as frontline workers in the fight against COVID-19.

To understand the phenomenon (experiences and expectations of ICU nurses providing care to COVID-19 patients), the following concepts were used: social world, intersubjectivity, collection of knowledge, biographical situation, interaction, human motivation for action (reasons for and reasons why), and typification(7). These concepts provided resources for the authors to determine the findings and elaborate the discussion in the present study.

Intersubjectivity pervades people’s routines in the social world in a certain biographical situation, that is, the position of an individual in the social context, with a collection of knowledge that allows people to act, influencing and being influenced. The interaction present in intersubjectivity is characterized not only by the physical and sociocultural environment in which everyday situations occur, but also by moral and ideological aspects. Past and present experiences (reasons why) and expectations (reasons for) are the human action’s driving force. Understanding this motivation expressed by people makes it feasible to unveil the typical characteristics of the experienced actions – invariant representation of the action of the person/group that makes them homogeneous, abstaining from individual characteristics, and of the recognition that they are inserted into a social group, which is a context of sharing of similar experiences in the world of life(7).

LOCAL

The setting of the present study was the relational work environment in which there were patients infected with the new coronavirus who were admitted to ICUs at public and private hospitals located in the city of São Paulo, state of São Paulo, Brazil.

PARTICIPANTS

The sample was made up of 20 ICU nurses providing care to COVID-19 patients.

SELECTION CRITERIA

The selection criteria were: nurses who worked in ICUs at public or private hospitals and provided care to COVID-19 patients, regardless of shift, length of work experience, gender, and marital status. Nurses who developed their professional activities in the management area only or who were on leave for any reason during the data collection period were excluded.

DATA COLLECTION

Data were collected according to the theoretical-methodological framework of social phenomenology. The approach to nurses was oriented toward those who met the inclusion criteria, showed interest in being part of the study, and were willing to offer their account voluntarily.

Aiming to approach the first participants, the main researcher contacted members of her professional network by phone to invite them to be part of the study sample and explain the study objectives, procedures, and ethical aspects. Once the nurses opted to participate in the study, their online...
The present study observed the steps recommended by the Consolidated Criteria for Reporting Qualitative Research (COREQ)\(^{(1)}\).

**Ethical Aspects**

The present study followed the ethical principles of Brazilian National Health Council Resolution no. 466/12, which addresses human research, and the proposal was approved by the research ethics committee of the applicant institution as per report no. 4.163.589, of July 20, 2020. The participants were identified by a code consisting of the letter N (as in nurse) followed by the number that indicated the participant’s interview order and the workplace (public or private hospital).

**RESULTS**

Ten participants worked in public hospitals and ten in private ones. There were 17 women and three men, and the ages ranged from 28 to 54 years old. Time since graduation and time working in ICUs were between two and 31 years. Only one participant did not receive training to provide care to COVID-19 patients.

It is important to mention that the exercise of organizing the participants’ accounts showed that the experiences and expectations of the nurses were similar, regardless of whether they worked in public or private hospitals. Consequently, the authors opted to categorize them together.

Analysis of the interviews allowed to find three categories that expressed the experiences of nurses with COVID-19 patients. In these categories, the typical characteristics of the actions experienced by this social group emerged: “Adjusting to the new way of delivering care in intensive care units”; “Being around situations that interfere with physical and mental health”; and “Projecting professional life after the COVID-19 pandemic”.

**ADJUSTING TO THE NEW WAY OF DELIVERING CARE IN INTENSIVE CARE UNITS**

The nurses reported that the increased demand for care in ICUs caused by COVID-19 cases hindered their job of delivering care, considering that the physical space had to be adapted so treatment for this disease could be offered: \(\text{We had to adapt the entire ICU (...) (...) we changed our work dynamics, we had no place to put on clothes and equipment. (N15 – public hospital)}\)

The hospital where I work was split by physical area according to the demand, and the number of beds was increased as the number of cases grew. \(\ldots \) they decided to isolate a specific floor...
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for COVID-19 patients, but we did not imagine that we would have so many cases, and that is why new ICUs were opened. We had to change the entire structure. (N11 – private hospital)

The nurses reported the wearing causing by continuously using personal protective equipment (PPE), which is indispensable to care of COVID-19 patients:

Having the mask on all the time changed the way of working in the ICU. It became more stressful. Reinhaling my own oxygen gives me headache and makes me feel hot, and sometimes even dizzy. (N4 – private hospital)

N95 masks make it really hard to breathe. I get out of breath and communication is more difficult because your colleagues do not hear you. We have to speak louder, and all this makes you feel more tired. (N14 – public hospital)

The interviewed nurses mentioned that the severity of the condition of COVID-19 patients required special care in the work routine in the unit:

(…) I have always dealt with critical patients, but those with COVID-19 are worse. Too many infusion pumps, too many drugs I did not even know (…). The patients are put in prone position, use many devices, tubes, catheters. (N2 – public hospital)

(…) although the work demand in the ICU is high, the condition of COVID-19 patients is much more serious. The disease has specific characteristics, such as quick instability, hypoxia and hypertension, and alteration in breathing pattern, which increases the demand. (N8 – private hospital)

The need to adjust to the new protocols of care to COVID-19 patients in ICUs was reported by the nurses:

(…) we had to establish and redesign protocols to meet the demands of patients with this disease (…) we were gradually finding out, adapting, and creating together everything we could do. I believe that the essence of care was kept, but now I see that it was very specific because we knew nothing about the disease. (N20 – private hospital)

(…) protocols were created to treat COVID-19 patients (…). We were slowly adjusting, trying to select the best Brazilian and international practices to provide patients with more benefits than losses. (N3 – private hospital)

Being Around Situations That Interferes with Physical and Mental Health

According to the participants, the severity of the condition of COVID-19 cases led to physical wearing, which impacted the emotional sphere:

(…) COVID-19 originates physical overload, so it requires more from professionals. Every day we have prone position, supine position, patients have skin injuries, it is really hard. (N19 – private hospital)

(…) I have worked a lot, the patients are critically ill (…) the high work demand does not allow us to eat, go to the bathroom, anything. (…) People are not standing working anymore (…) the physical and psychological load increased a lot. (N6 – public hospital)

The participants declared that uncertainty regarding care of COVID-19 patients brought about fear of contamination, which affected their mental health:

(…) what impacted me the most was the fear of getting infected and transmitting the disease to my family. (…) I started being more careful at work, I do not take my mask off at any moment, just during meals, during which I am alone. (N9 – private hospital)

(…) the most difficult thing for us was the emotional impact because we did not know what we would face, if we would get contaminated and bring the disease to our families. We could get infected and die. The most complicated part was managing the emotional aspect. (N18 – public hospital)

Seeing work colleagues developing the disease contributed to the emotional wearing, according to the interviewed nurses:

(…) many professionals got sick, were contaminated. I saw people getting sick near me. I worked with someone on a certain day, and the next day the person was contaminated (…) there were nurses who were admitted to ICUs, several nurses. One was tracheostomized. (N1 – public hospital)

(…) I saw many colleagues getting sick, that made me more worried, tenser, sometimes you have an anxiety crisis (…) it messed with me and still does, interfered too much with my personal life. (N5 – public hospital)

The fact that critically ill patients’ relatives kept social distancing and were not at the hospital with them was also considered a cause of emotional wearing by the nurses:

(…) the family could not see the inpatient, the person would be left alone, those who were conscious got anxious and scared. So did the relatives, because they would spend the entire day waiting for information. That was the saddest part for me, a deep sadness. It wore me out emotionally. (N17 – private hospital)

(…) the patients are left alone because their families cannot visit them, and we do not have much time to give them attention and talk, this situation made me very sad and anxious. (N13 – public hospital)

The participants mentioned that, over time, the institution made online contact or phone calls available for relatives to interact with COVID-19 patients, which minimized distress on both sides:

(…) seeing the sadness of the families and patients was stressful, but gradually we implemented online visits. But I do find it very difficult for patients to stay here, all alone, hearing no word from anyone. (N7 – private hospital)

(…) when those older patients could not use the cell phone, I helped them to call their families and, in many cases, that was the last contact because, shortly after, they were intubated and died, but at least they got a chance to say goodbye (…). (N6 – public hospital)
Body identification via cell phone and lack of a funeral for COVID-19 patients emotionally impacted the nurses:

(... one of the most difficult things in my life was carrying out body identification with the family by video. This is something that will stay with me forever, my psychological side was really shaken. (N16 – private hospital)

(... I had never imagined to witness so many people dying at the same time. The number of deaths was very high, and the families had no longer contact and were not allowed to bury, keep a vigil over, did not experience the death, mourning process. (N10 – public hospital)

Despite emotional distress and physical wearing, nurses declared that they made through the hardships and overcame the difficulties, remaining in the forefront of care of COVID-19 patients:

(... at the beginning, I cried a lot. There were days on which I got in the car, got around, stopped the car, and just cried. I do not know if I cried out of fear, stress, but then I ended up wiping my face, turning around, and going work. (N12 – public hospital)

(... at first, it was quite consuming, but now I feel we gradually adapted (...). What was very difficult before is now part of our routine. (N4 – private hospital)

PROJECTING PROFESSIONAL LIFE AFTER THE COVID-19 PANDEMIC

Experiencing the COVID-19 pandemic made the nurses want to expand their theoretical and practical knowledge in the nursing area:

(... regarding my professional life, I want to study more, keep working in the nursing field (...). we get more recognition when we have knowledge about what we do, we get to be respected. (N7 – private hospital)

(... I hope I keep studying. This pandemic showed me the importance of studying and challenging myself (...). I have learned that I must pay more attention to my patient so I can provide adequate care and develop a better relationship with the team. (N14 – public hospital)

The desire for professional recognition by means of meritocracy was cited by the participants:

(... I wish the institution would offer more opportunities to grow by means of meritocracy rather than indication, especially by giving us a pay rise. Receiving a bonus at the end of the year that helped pay for a graduate course, getting more investment, and these things should count for the career plan. (N8 – private hospital)

(... there has to be constant competence-based evaluation (...). incentives by managers for us to treat patients with dignity, and those who do not meet the criteria should be transferred from the institution. (N1 – public hospital)

The expectation of leaving the profession because of the nurses or absence of perspectives of professional growth was mentioned by the participants:

(... I am considering quitting nursing. It is a nice profession that gave me many good things, many friends, but it is too much, even because of the emotional load. I will go on a while, endure a while, but I want to rethink it. (N9 – private hospital)

(... I began having other objectives because there are no perspectives of professional growth for me. (N17 – private hospital)

(... I hope to finish this cycle, which was difficult, in about two years. (N20 – private hospital)

DISCUSSION

Analysis of the accounts allowed the researchers to understand the role played by the interviewed nurses, whose living processes encompass their experiences (reasons why) and expectations (reasons for) related to working in an ICU to deliver care to COVID-19 patients. This experience show the declared meaning of a group of professionals. According to social phenomenology, human experience is set in the context of social relationships and characterized by the biographical situation and the collection of knowledge developed over life, with common purposes and objectives. The intersubjectivity inherent in the social context shares these purposes and objectives, making a social meaning emerge[27].

The experiences (reasons why) showed that, in face of the high number of patients affected by COVID-19 who required intensive care, there was the need to adjust the environment to offer care, which made health services convert other hospital sectors into ICUs or expand the existing units. These results corroborated those reported in a study carried out in a hospital in New York, United States, which pointed out that increasing the number of intensive care beds and/or adapting them led to limitations in work in sectors that were not originally designed to be ICUs. Among these limitations, the professionals highlighted the absence of centralized nursing stations, difficulty accommodating beds for adults in pediatric units, and lack of supplies. Additionally, some of the expanded ICUs were far from essential services, including pharmacy and laboratory[12].

The high risk of contamination with the new coronavirus that nurses who provide care to COVID-19 patients are exposed to is even higher in an ICU setting. This means that, for these professionals, continuously using PPE, such as masks, face shields, goggles, lab coats, and gloves, is indispensable. Wearing this type of equipment uninterruptedly was reported as exhausting, because of the inconvenience and discomfort they originate. A study carried out in a hospital in Singapore with 158 frontline workers fighting COVID-19 indicated similar results, since it pointed that 81% of these professionals had headaches associated with constant use of PPE, especially N95 masks. The participants reported feelings of pressure and weight and pain in affected places and most of them (91.3%) declared that intensification of PPE use negatively impacted their performance at work[13].
The level of severity of the conditions of COVID-19 patients was emphasized by the participants of the present study as a factor that increased care intensity. Similar results were found in a study performed in three hospitals in Belgium that indicated that nursing care time was significantly higher for COVID-19 patients when compared to time spent with other patients. Some factors that lengthened this time were hygiene, mobilization, monitoring, and continuous venous hemofiltration.

Lack of knowledge about characteristics of COVID-19, mainly regarding disease physiopathology, called for creation and adaptation of care protocols in the ICU setting. The development of these protocols, based on international recommendations, is justified by the fact that professionals who assist COVID-19 patients have to be attentive to conventional care and, additionally, avoid aerosol dispersion in the environment and carry out procedures that include heparinization, donning and doffing of PPE, and prone positioning, among others.

From the social phenomenology perspective, the collection of knowledge of nurses, accumulated over life and characterized mainly by technical elements of professional training, puts them in a specific biographical situation in the COVID-19 pandemic scenario. The current situation emphasizes the need for professionals to expand their knowledge about care of people infected with the new coronavirus, taking into account the disease severity and the singular aspects of the care it requires. Nurses, with their knowledge and skills, prove fundamental for fighting the pandemic, which includes the intensive care context. However, the social interaction established in this environment is considered difficult and associated with negative impacts on professionals' physical and mental health.

In the mental health field, fear of contamination at the workplace stood out. A qualitative study with intensive care nurses who worked in a Spanish hospital showed, in agreement with the results of the present study, that fear was the emotion most commonly reported by the participants, who dealt with COVID-19 patients. This emotion was related to the disease's high transmissibility and high rates of aggravation and mortality and interfered with delivery of care to patients and anxiety levels in these professionals.

According to the participants of the present study, aspects intrinsic to critical care of COVID-19 patients affect nurses' physical and mental health and are closely related to the disease severity and the work overload experienced by the professionals. This finding was corroborated by a study involving 557 nurses from Madrid, Spain, that gathered accounts describing work overload and high numbers of patients receiving care from only one nurse during the COVID-19 pandemic. In addition, 44.9% of the nurses mentioned that they always felt emotionally drained at the end of their shift.

Emotional wearing caused by seeing colleagues getting sick was also emphasized by the participants. A study in the United States and United Kingdom identified that the chances of frontline health workers testing positive for COVID-19 were 12-fold higher than those calculated for people in the community.

Another issue that affected nurses' mental health was the need to keep relatives of patients admitted to ICUs away. Lack of visits to people under treatment for COVID-19 has caused emotional distress in patients, relatives, and health professionals, since it precludes families from comforting their loved ones and communicating with health teams. Restriction of visits to patients is an extra psychological burden for ICU nurses that increases the feelings of helplessness and guilt. Professionals have to resort to technological solutions that facilitate connection between families and patients and between these two groups and ICU teams. Among the possibilities, phone calls, video calls, and virtual visits to ICUs stand out.

The need for distancing remains when patients die, because relatives can neither say goodbye to their loved ones who had COVID-19 nor keep a vigil over them. The fact that people who provide care cannot prepare relatives to a possible death also increases the distress in these professionals. The impossibility of preparing for the death of a person with COVID-19 or saying goodbye to them was reported as a traumatic experience that can make grieving more painful or even incomplete, capable of triggering psychological distress and a complicated mourning process.

The interviewed nurses declared that, despite the difficulties, they were able to adjust to the situation so they could give continuity to care of patients. This aspect was observed in a study carried out in a hospital in Jiangmen, China, that found high levels of resilience, strength, and optimism in nurses who worked in the frontline fight against COVID-19. Resilience showed a negative correlation with obsessive-compulsive symptoms and depression, a finding that stresses the importance of this attitude to preserve professionals' mental health.

The experiences of the interviewed sample stressed the negative influence of the interaction between nurses and patients, their relatives, and the workplace, caused by the high level of transmissibility and severity of the disease, the compulsory use of equipment that promotes social distancing, and work overload. All these factors impact physical and mental health. Social phenomenology advocates that human interaction is fundamental for developing positive social relationships in the world of life, which are characterized by a subjective motivation context in which people establish a reciprocal orientation between one another, sharing convergent intentionalities.

Being around COVID-19 patients admitted to ICUs included plans for the participants' future professional lives. This motivation prompts people to look into the future and is related to the collection of knowledge and the biographical situation at the time they project the action they want to experience.

The competences required from nurses to carry out their professional practice with COVID-19 patients admitted to ICUs stirred the desire of improving their skills and expanding their knowledge in the nursing area. Continuing education stands out as an important alternative to steadily
improve care. A study with 147 nursing professionals who worked at a hospital in the South Region of Brazil showed that a continuing education program improved quality (72.7%) and assertiveness (89.0%) in the tasks executed in the care routine and increased self-confidence in one’s work (66.6%)\(^\text{28}\).

Another point that emerged in the participants’ accounts was the desire of receiving professional recognition through meritocracy, since this criterion was not used in performance evaluations in the institutions where they worked. A qualitative study with hospital nurses in Iran identified that lack of meritocracy was part of their routines, which led them to consider working in another institution, quitting, or even leaving the profession. Additionally, nurses noticed that ignoring meritocracy was a sign of indifference to the developed work by the managers and made these health workers feel useless\(^\text{29}\).

It must be emphasized that the high emotional impact experienced in the everyday life of the interviewed nurses made them consider leaving their profession. This finding was corroborated by a study with 320 ICU nurses in Iran that reported high levels of burnout in the participants, with a rate of emotional wearing of 70% and a rate of only 49% of personal fulfillment. Professional wearing showed a directly significant relationship with intention of leaving nursing\(^\text{25}\).

Initiatives to improve the working scenario in ICUs can positively impact nurses’ well-being, with favorable results in the maintenance of these workers in the area and care quality. According to social phenomenology, social reality can be modified by human action, with its intentionalities being the starting point. Considering that plans and objectives are elements that make up the relational system between those who share the same time and space in the social world, the desire of changing reality is founded on what has already been experienced\(^\text{19}\).

The results of the present study brought, as a contribution to the progress of scientific knowledge, the identification of intersubjective aspects present in the work carried out by nurses in ICUs with COVID-19 patients related to working conditions, professional recognition and training, and support to physical and mental health, taking into account the care intensity required during the COVID-19 pandemic. The authors would like to stress the indispensability of strengthening public policies that include the fulfillment of the demands presented by these nurses.

As a limitation of the present study, the authors mention the fact that it allowed to understand the professional practice of a specific social group of nurses, whose typical experiences and expectations can differ from those inserted in other realities, which precludes generalization of the results.

**CONCLUSION**

From the social phenomenology perspective, the experiences of ICU nurses during delivery of care to COVID-19 patients showed that there was the need to adapt to the new way of providing care in this setting regarding getting used to changes in the physical space of the unit, new institutional protocols, continuous use of PPE, and care specificities required by patients affected by this disease. This new reality brought about the necessity to be around situations that interfered with physical and mental health and involved fear of contamination, severity of patients’ conditions, the experience of seeing colleagues getting sick, and the need to keep patients and their relatives apart, which included contact and body identification by phone calls or video calls.

The present study also showed that the expectations of some of these nurses for the post–COVID-19 pandemic period were expanding their theoretical and practical knowledge in the nursing field and receiving professional recognition through meritocracy. However, for other participants, lack of perspectives regarding professional growth and the emotional wearing involved in the process of providing care stirred the desire to leave the profession. These findings point to the importance of investing in the support to nurses for them to properly develop their activities in this type of hospital setting. Structural and organizational measures that take into account these professionals’ well-being should be implemented. Improvement of professional training programs should also be considered so nurses can be instrumentalized to provide care in the COVID-19 pandemic context.
Experiencias de intensivo cuidado unitarios con pacientes COVID-19

Resultados: Los enfermeros manifiestan demandas relacionadas a condiciones laborales, valoración y capacitación profesional, además del apoyo a la salud física y mental, considerando la intensa atención practicada en pandemia. Conclusion: La comprensión de la experiencia de los enfermeros mostró que fue necesario adaptarse a ese nuevo modo de cuidar, que incluye espacio físico, nuevos protocolos institucionales, uso permanente de equipos de protección y atención diferenciada requerida por los pacientes. Esto generó necesidad de convivir con situaciones que interfieran en su salud y en la motivación para realizar proyectos para la vida profesional luego de la pandemia por el nuevo coronavirus.

DESCRIPTORES
Coronavirus; Unidades de Cuidados Intensivos; Enfermería de Cuidados Críticos; Estrés Psicológico; Práctica Profesional.

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