# ADVERSITIES EXPERIENCED BY NURSING PROFESSIONALS IN INTENSIVE CARE UNITS IN TIMES OF COVID-19

## ADVERSIDADES VIVENCIADAS POR PROFISSIONAIS DE ENFERMAGEM EM UNIDADES DE TERAPIA INTENSIVA EM TEMPOS DE COVID-19

## ADVERSIDADES EXPERIMENTADAS POR LOS PROFESIONALES DE ENFERMERÍA EN UNIDADES DE CUIDADOS INTENSIVOS EN TIEMPOS DE COVID-19

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**How to cite this article:** Góes FGB, Silva ACSS, Santos AST, Pereira-Ávila FMV, Silva LJ, Silva LF, et al. Adversities experienced by nursing professionals in intensive care units in times of COVID-19. Rev baiana enferm. 2022;36:e45555.

Objective: to describe adversities experienced by nursing professionals in intensive care units in times of COVID-19. Method: descriptive and exploratory research, with a qualitative approach, involving 28 nursing professionals from intensive care units in the state of Rio de Janeiro in April 2020. Data processed in the *Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires*. Results: by the Descending Hierarchical Classification, three classes were obtained: fear of the unknown and lack of personal protective equipment and support to nursing professionals; lack of flows, protocols, information, materials and training of teams to promote safe assistance; and stress in caring for patients with positive COVID-19, risk of contamination and death and constant need for guidance on preventive measures. Final considerations: such adversities influenced the care practice and psychoemotional health of nursing professionals, and public policies and management and care strategies were needed to minimize them.

Descriptors: Nursing. Nurse Practitioners. Intensive Care Units. Coronavirus Infections. Health Care.

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*Objetivo: descrever adversidades vivenciadas por profissionais de enfermagem em unidades de terapia intensiva em tempos de COVID-19. Método: pesquisa descritiva e exploratória, de abordagem qualitativa, envolvendo 28 profissionais de enfermagem de unidades de terapia intensiva no estado do Rio de Janeiro em abril de 2020. Dados processados no Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires. Resultados: pela Classificação Hierárquica Descendente, obtiveram-se três classes: medo do desconhecido e falta de equipamentos de proteção individual e suporte aos profissionais de enfermagem; falta de fluxos, protocolos, informações, materiais e treinamento das equipes para promoção de uma assistência com segurança; e estresse no cuidar do paciente com COVID-19 positivo, risco de contaminação e morte e necessidade constante de orientações sobre medidas preventivas. Considerações finais: tais adversidades impactavam na prática assistencial e na saúde psicoemocional dos profissionais de enfermagem, sendo necessárias políticas públicas e estratégias gerenciais e assistenciais para minimizá-las.*

*Descritores: Enfermagem. Profissionais de Enfermagem. Unidades de Terapia Intensiva. Infecções por Coronavírus. Assistência à Saúde.*

*Objetivo: describir las adversidades experimentadas por los profesionales de enfermería en las unidades de cuidados intensivos en tiempos de COVID-19. Método: investigación descriptiva y exploratoria, con enfoque cualitativo, en la que participaron 28 profesionales de enfermería de unidades de cuidados intensivos del estado de Río de Janeiro en abril de 2020. Datos tratados en la Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires. Resultados: por la Clasificación Jerárquica Descendente se obtuvieron tres clases: miedo a lo desconocido y falta de equipo de protección personal y apoyo a los profesionales de enfermería; falta de flujos, protocolos, información, materiales y capacitación de los equipos para promover la asistencia segura; y el estrés en la atención a pacientes con COVID-19 positivo, el riesgo de contaminación y muerte y la necesidad constante de orientación sobre medidas preventivas. Consideraciones finales: tales adversidades impactaron en la práctica asistencial y en la salud psicoemocional de los profesionales de enfermería, y se necesitaron políticas públicas y estrategias de gestión y cuidado para minimizarlas.*

*Descriptores: Enfermería. Enfermeras Practicantes. Unidades de Cuidados Intensivos. Infecciones por Coronarivus. Atención a la Salud.*

## Introduction

Contamination among people by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which caused Coronavirus Disease 2019 (COVID-19), presents a serious public health problem in several countries, including Brazil, with serious health, social, economic and political impacts. The World Health Organization recorded more than 232 million cases worldwide by the end of September 2021. In Brazil, this disease reached over 21 million people up to the same period, with a lethality rate of 2.8%[1]. According to the *Conselho Federal de Enfermagem*, 58,559 nursing professionals reported contamination and 866 deaths were confirmed among individuals in the class[2].

SARS-CoV-2 is highly transmissible by droplets and aerosols expelled by the speech, sneezing or coughing of an infected person, especially indoors and in hospital environments. When the necessary containment measures are not adopted, the exposed individual can be contaminated and develop the disease or not[3]. The clinical picture of COVID-19 has a broad spectrum, from fever and flu-like syndrome to severe pneumonia with important pulmonary involvements requiring hospitalization and, in many cases, intensive care. Among the complications, severe acute respiratory syndrome (SARS), heart failure and secondary infection stand out[4].

There was an increase in the demand in health services for the treatment of the disease, overloading the health systems of the countries most affected by the pandemic, including Brazil. This demand generated overcrowding of institutions and exhaustion of professionals who work on the front line, including high complexity care. Given this pandemic context, the pressure on the global health workforce promoted different adversities, as many workers not only fought the virus and the disease, but also the

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humanitarian crisis, with limited supplies of protective items. This set of factors put them at imminent risk of contamination[5-6].

At the forefront of care for critically ill patients affected by COVID-19 in intensive care units, there are nursing professionals, who are dedicated full-time to the care of the sick. However, the physical proximity to the severe patient and the procedures that generate a greater number of droplets and aerosols increase the risk of infection for these professionals. With emphasis on intubation and orotracheal aspiration, two practices constant in this scenario, are the procedures with the greatest potential for contamination[7].

Nursing professionals are not only vulnerable to a greater possibility of infection, but also to mental health problems, for fear of falling ill, dying and of contaminating patients and family members. Data point to physical and psychic exhaustion, difficulties in decision-making and anxiety due to the pain of losing patients and colleagues, as well as the risk of infection and the possibility of transmitting to family members[8-9].

Therefore, there are countless adversities faced by health teams, especially nursing, before this pandemic. However, primary studies, which point to the concrete working conditions and the reality experienced by nursing teams in intensive care units in the Brazilian context, to combat the new coronavirus, are still scarce in different information resources in the health area, considering the contemporaneity of the world situation.

Therefore, every initiative that seeks to add new evidence in order to collaborate in assertive decision-making in care and management related to coping with this problem by professionals working on the front line is valid, including intensive care, which justifies the accomplishment of this investigation. Thus, the aim of the study was to describe adversities experienced by nursing professionals in intensive care units in times of COVID-19.

## Method

Descriptive and exploratory research, with a qualitative approach[10], which followed the Consolidated Criteria of Qualitative Research Reports (COREQ), whose data collection occurred in online format. The inclusion criteria were: nursing professionals working in intensive care units in the state of Rio de Janeiro and who treated suspected and/or confirmed cases of patients with COVID-19. Exclusion criteria were not adopted. The constitution of the sample considered the minimum number necessary by the analysis software, which recommends between 20 and 30 texts[11]. Thus, 28 health professionals participated.

Data collection was performed between April 20 and 27, 2020, by semi-structured form, made available by e-mail and WhatsApp. To recruit the participants, the snowball technique was adopted, performed through reference chains to locate potential participants. The first professionals invited by the research team, at the end of filling out the form, indicated other possible participants.

The instrument used contained two parts: general information – gender, age, professional category, time of professional training, specialization, type of hospital, sector of activity and work scale; information regarding professional performance, main challenges experienced and possible coping strategies during the COVID-19 pandemic. The form was validated regarding appearance and content by professors with PhD in nursing.

The analysis was performed using two software: IBM®SPSS – for the analysis of the characterization of the participants regarding the closed questions of the first part of the instrument, through descriptive statistics with calculations of absolute and relative frequency and measures of central tendency (mean, minimum and maximum) and dispersion (standard deviation); *Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires* (IRAMUTEQ) – for the processing of the textual corpus generated by the answers of professionals regarding the open questions present in the second part of the form, using the methods Word Cloud and Descending Hierarchical Classification (DHC).

It is noteworthy that the interpretation of text segments was based on the methodological

assumptions of Thematic Analysis, which consists of discovering the cores of meanings that compose a communication whose presence or frequency means something for the analytical object[10]. To this end, the active forms of each class of text segments, including nouns, adjectives and unrecognized forms, were redeemed, such as, for example, the acronyms, especially those that obtained a value ≥3.84 in the chi-square test ($\chi^2$), revealing the associative force between the words in their respective class. With this rescue, we sought to reach the core of understanding the participants' responses, making inferences and interpretations according to the conceptual frameworks of the study.

The study was approved by the *Comissão Nacional de Ética em Pesquisa* (CONEP), with the Certificate of Presentation for Ethical Appreciation (CAAE) n. 30612920.6.0000.0008, and Opinion n. 3.980.287. Participants had their confidentiality and anonymity assured, upon acceptance of the Informed Consent Form made available online. In the identification of the speech fragments in this article, an alphanumeric code was used, in which the letter P (participant) is followed by a cardinal number, according to the order of participation in the research.

## Results

The participants were 28 (100%) nursing professionals. The majority – 24 (85.7%) – consisted of women, with a mean age of 35.5 years (SD=7.3), with a minimum of 24 years and a maximum of 51 years. Regarding professional education, 23 (82.1%) had the highest degree in nursing, however, among these, 6 (21%) also had technical training in the area and the other 5 (18%) were exclusively nursing technicians. The mean time of professional training was 9.9 years (SD=6.6), with a minimum of 8 months and maximum of 24 years. Most professionals – 23

(82.1%) – had specialization courses, but only 7 (25.0%) in intensive care.

Concerning professional performance, more than half – 17 (60.7%) – worked exclusively in intensive care units in the public sector, 7 (25%) in the private sector, 3 (10.7%) from both sectors and 1 (3.6%) from the philanthropic sector. Most of them, these hospitals are located in the capital or metropolitan region of the state of Rio de Janeiro – 24 (85.7%) – but there was the participation of professionals working in hospitals in the *Região Serrana* – 2 (7.1%) –, *Norte Fluminense* – 1 (3.6%) – and *Baixada Litorânea* – 1 (3.6%). Although 23 (82.1%) professionals were nursing graduates, the position of nurse in the hospital was occupied by only 18 (64.3%) of these participants. Therefore, 10 (35.7%) worked as nursing technicians. It is noteworthy that, predominantly, these were team members – 22 (78.6%) – who worked in direct care to adult patients who required intensive care, including those with COVID-19, and the other 6 (21.4%) were nursing supervisors, but also treated suspected and/or confirmed cases of patients with this disease. Nevertheless, 10 (35.7%) professionals reported not having participated in training related to this disease.

After data processing by the basic statistics of the analysis software, the textual corpus was formed by 28 texts concerning the number of forms answered, and 2,011 words, among these 583 distinct forms and 345 hapax, that is, with a single occurrence and average of 71.8 words per text. For the visualization of the most relevant terms in the textual corpus, based on their frequencies and in order to understand the adversities experienced by professionals in intensive care units in times of COVID-19, the Word Cloud method allowed positioning the lexicons grouped and organized graphically in the form of a cloud. The words most often are the largest and the most centrally arranged in Figure 1.

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**Figure 1 –** Word Cloud



Source: Provided by software IRAMUTEQ.

In this directive, the active forms, with recurrence of up to five times that, in the analysis of text segments, were correlated with the adversities under investigation were: PPE (30), professional (29), patient (24), lack (21), training (21), team (18), adequate (15), fear (15), COVID-19 (14), care (12), care (12), nursing (11), work (11), care (10), illness (9), backup (8), ICU (8), difficult (8), person (8), act (7), better (7), psychological (7), health (7), support (7), due (6), emotional (7), structure (6), front line (6), material (6), know (6), contaminate (5), give (5), sizing (5), flow (5), hospital (5), information (5), personal (5) and safety (5). These shapes will be detailed in the classes.

Later, in the segmentation of the textual corpus by classes of text segments and their words, the Descending Hierarchical Classification allowed highlighting the central ideas derived from the participants' responses. Thus, hierarchical analysis withheld 63 text segments, classifying 53 of them. Therefore, a utilization of 84.1% was obtained. In addition, it formed three stable classes, that is, three groupings of units of text segments with similar vocabularies and associated with each other. Based on the analysis, the data were organized in a dendrogram (Figure 2) that illustrates the relationships between the classes.

**Figure 2 –** Dendrogram in Descending Hierarchical Classification
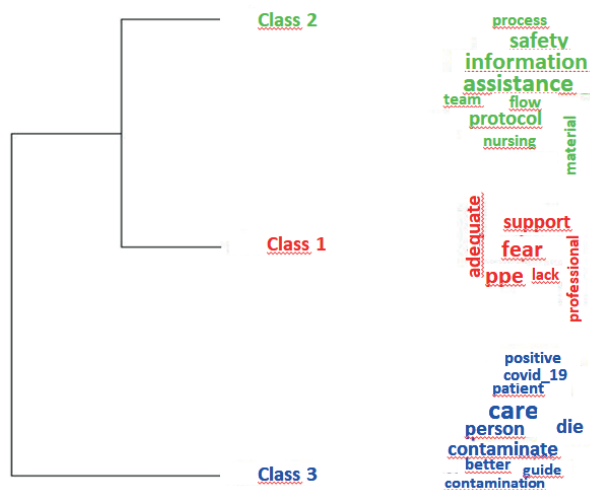


Source: Provided by the software IRAMUTEQ.

In the dendrogram, the textual corpus was divided into two subcorpus. The first was composed of Class 3 in blue (39.6%); the second, by a subdivision, including Class 1 in red (28.3%) and Class 2 in green (32.1%), associated with each other. The classes were analyzed thoroughly, through the assumptions of Thematic Analysis, in order to understand and name each of them, based on their meaning core.

### Class 1 – Fear of the unknown and lack of personal protective equipment and support for nursing professionals

Class 1 displays 28.3% of text segments. The active forms that presented Chi$^2$ ≥3.84 in decreasing order were: fear, PPE, support, lack, adequate and professional. Therefore, the first term pointed to a nodal issue experienced by professionals in coping with COVID-19 in intensive care environments, namely: the fear of the unknown in relation to the new coronavirus, given the uncertainties that persist about it.

*Nursing does not feel prepared to cope with it. I know many who have given up because they are afraid of the unknown.* (P3).

*My ICU* [Intensive Care Center] *specializes in patients diagnosed with COVID-19 who are in serious condition. It is quite difficult, for fear of the unknown.* (P1).

*Fear itself* [...] *I notice intense discomfort, mainly because of the insecurity related to the new, to which it is still little known.* (P24).

Also from the perspective of fear, nursing teams experience the continuous fear of contaminating themselves and their families. This feeling is hindering the care of patients, including through absences and withdrawals from work among employees, which leads to an overload for those who remain.

*There is a feeling of fear, because while we care, we are being careless.* (P6).

*Fear is hindering proper care* [...] *When a colleague calls in fear, because he is feeling some symptom, already warn to stay far, send the leave by WhatsApp, do not even appear here in the next 14 days.* (P22).

*Fear of contaminating family members and work overload due to the absence of sick professionals.* (P1).

Fear is enhanced by the lack of structure and adequate materials, especially Personal Protective Equipment (PPE). Therefore, the professionals pointed to the urgency of having them in sufficient quantity and quality.

*Too much fear and without proper protections, lack of adequate infrastructure and quality PPE* [Personal Protective Equipment]. (P26).

*Dealing with fear and lack of PPE* [Personal Protective Equipment] *adequate in sufficient quantity.* (P4).

*The lack of resources* [...] *on the front line and PPE* [Personal Protective Equipment] *suitable for working.* (P3).

Also in this class, the word support was also relevant, being a demand raised by the participants who wished to have psychological support and emotional support before the difficulties imposed by the new reality, both in the field of physical and mental health. Consequently, the participants indicated the need for this type of backup and support for nursing professionals, especially by managers, to help deal with this crisis, including for professionals already affected by COVID-19.

*I am a nurse at the ICU* [Intensive Care Center] *reserved for patients with COVID-19. It has been really hard. PPE* [Personal Protective Equipment] *hurts a lot. We went hours without going to the bathroom and without drinking water. The insecurity of contaminating* [...] *Psychological support for the team* [...] *to the professionals.* (P23).

*I am responsible for the night service in an adult coronavirus ICU* [Intensive Care Unit]. *Difficult and with few positive results. Physical and emotional exhaustion shaken by seeing so many young people dying* [...] *Psychological support.* (P27).

*We need PPE* [Personal Protective Equipment], *but we also need support, answers, humanity, we are co-workers* [...] *We are called to work in a Campaign Hospital, which they say we are at war and we do not have the least to keep our protection, our proper care, our mental health.* (P22).

### Class 2 - Lack of flows, protocols, information, materials and team training to promote safe assistance

Class 2 was composed with 32.1% of the text segments. In this, the active forms that presented Chi$^2$ ≥3.84 in descending order were: assistance, information, flow, security, protocol, material and

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team. In this directive, worker mentioned better working conditions in intensive care before the COVID-19 pandemic, through, for example, the lack of care flows and protocols that promoted the safety of all.

> *The lack of flow and proper protocols increases the exposure of the professional to avoidable situations [...] Minimum protocols and coherent and cohesive flows.* (P22).

> *Troubled [...] Lack of well-defined protocols in the institution.* (P8).

> *Optimized processes, flows and security barriers [...] Respect the guidelines of the WHO [World Health Organization]. Risk groups should be distanced [...] COVID-19 sectors isolated.* (P6).

Nursing professionals also pointed out the lack of information and dialogue between managers, at the level of leadership or direction, with professionals who were on the front line, in direct nursing care to patients in intensive care.

> *Provide nursing care to patients with COVID-19 hospitalized in ICU* [Intensive Care Center], *using the nursing process, without forgetting the management of the sector and the team, promoting the safety of all. Complex, for lack of [...] better management of the hospital as a whole. The lack of information, protocols and dialogue has made the work difficult. Greater dialogue between direct patient care teams and hospital management [...] Dialogue of the leadership with the team.* (P28).

> *Lack of information on how to act in COVID-19 cases by nursing management.* (P19).

It is noteworthy, in this class, that the professionals pointed out the lack of equipment and materials, such as respirators, monitors and medications that could ensure adequate care to patients.

> *More work material. Respirators that work. Medicines for all patients who need [...] Good quality appliances. More dignified care for patients.* (P13).

> *The lack of adequate material [...] medication and monitor without MBP* [Mean Blood Pressure]. *Improper packaging of materials due to lack of structure [...] A balanced team, with flows, responses, medicines and materials available, structure, support.* (P22).

> *Improvement of equipment, because we have very small amount, without equipment.* (P19).

Another aspect highlighted by the participants was the lack of constant theoretical and practical training on COVID-19 for the teams, especially regarding the appropriate use of PPE.

> *It has been difficult due to lack of training and working conditions.* (P12).

> *Training the teams that work with these patients to reduce the chances of infection and cross-contamination. (P3).*

> *Training for the use of PPE* [Personal Protective Equipment] *to correctly put on and take off.* (P4).

Finally, regarding the term team, the appropriate personnel dimensioning also presented itself as an important element in the segments of texts added to class 2.

> *Proper sizing to reduce work overload.* (P5).

> *Increase team sizing and provide the right infrastructure.* (P26).

> *Training and proper sizing.* (P28).

## Class 3 - Stress in caring for patients with positive COVID-19, risk of contamination and death and constant need for guidance on preventive measures

Class 3 displays 39.6% of the text segments, in which the active forms that presented $Chi^2 \geq 3.84$ in descending order were: caring, person, patient, COVID-19, contaminating, better, dying, positive, guiding and contamination. Therefore, it presents textual segments related to the difficulties of caring for patients/people with COVID-19 in the critical care environment by these professionals who are on the front line, which, by itself, represents a great challenge for the participants.

> *Direct assistance to patients suspected of COVID-19. We bathe, change the dressing, administer medication, monitor vital signs.* (P3).

> *Taking care of the patient, giving my best, easing the patient's suffering as much as possible. Do everything for him to come out of the crisis and recover from his illness.* (P13).

In this sense, the care of patients with COVID-19 in critical condition in intensive care was described as a stressful work from the perspective of nursing professionals who worked directly and continuously in care.

> *Take care of the patients in critical condition [...] stressful.* (P7).

> *I act directly in caring for COVID-19-positive patients [...] stressful.* (P20).

*I am a care nurse in the ICU* [Intensive Care Unit] *and do everything I can. It is stressful and tiresome.* (P11).

Besides the stress, there is the tension due to the imminent risk of contamination and death among patients, given the unpredictability of the evolution of the clinical picture, in addition to the risks for the own professionals.

*Acting in an unsafe scenario, taking care of patients who have a completely different course from the same diagnosis of COVID-19* [...] *and not contaminating yourself.* (P6).

*It is scary to see people die and not have much to do. You try to do your best, but no matter how hard you try, the patient's condition doesn't improve. You see him die without being able to prevent* [...] *And no matter what you do, the person ends up evolving into a tube and dying.* (P13).

*Taking care* [...] *tense and trying not to contaminate. That people should believe the reality we are living.* (P16).

In addition to the issues of direct care to the severe patient with COVID-19, nursing professionals also highlighted the constant need for guidance on preventive measures to reduce the transmission of the virus and what to do before the symptomatology of the disease.

*Caring for infected people and sensitizing the population about hand hygiene and care against contamination.* (P2).

*As a professional, my role is to care for and guide patients, visitors and healthcare staff about prevention measures.* (P8).

*At that time, I have been orienting many people about prevention measures and* [...] *what to do in the presence of signs and symptoms.* (P6).

## Discussion

Among the adversities experienced by nursing professionals in intensive care units in times of COVID-19, there was emphasis on the fear of the unknown, as well as the lack of personal protective and support equipment. Although nursing professionals, in general, are accustomed to dealing with stressful situations, the pandemic scenario emerged as something new, sometimes chaotic, which directly affected several dimensions, including psychoemotional among workers[8].

Health professionals working in the care of critically patients with COVID-19 are already directly and continuously exposed to different occupational risks, which were enhanced before the pandemic triggered in 2020. Therefore, they continued to be more vulnerable to physical and psychological illness than the general population. In this argumentative line, a Spanish study, which aimed to explore the impact of care delivery to patients with COVID-19 in the intensive care health team, highlighted distinct psychological, professional and moral damages suffered by these workers, which were potentiated in the second wave of the pandemic, in this country, between August and November 2020. Although more information and protocols were available, the professionals reported becoming increasingly exhausted, causing them to lose the resilience skills they had developed during the first wave, including the deflagration of burnout syndrome[12].

There is significant and evident stress in the nursing team in the context of critical and complex care, especially because they maintain direct contact with infected patients, in addition to experiencing the death of colleagues who became infected. This duality implied the increase in fear of being contaminated with the virus, which corroborated the findings of the present study. In this sense, even though more than one year has elapsed since the beginning of the pandemic, it remains essential to take up strategies that support nursing professionals, working the mental stress experienced by them throughout this process. For example, a Chinese hospital established, as a protocol, a 30-minute meeting with nurses working in areas intended for patients with COVID-19, to sensitize them about adequate equipment and protection resources. Moreover, whenever they felt some discomfort, they were evaluated, and help was provided to meet their demands[13].

The safety of the frontline workforce should remain a high priority in management and care actions. Thus, periodic training is still crucial regarding the appropriate use of standard precautions and hygiene practices[6], as demanded by the participants. However, the use of PPE in daily care is a problem that has

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been reported since before the COVID-19[14-15] pandemic and has remained in different practice scenarios. However, according to regulatory standard NR32, it is the employer's responsibility to provide protective equipment for professionals during the work activity[16].

To ensure the minimal risk of infection when caring for patients with COVID-19, it is indicated the adoption of standard precautions, especially the use of PPE (goggles or facial protector, N95 mask, gloves, apron and cap), and the frequent hygiene of the hands with antiseptic solution[6]. However, throughout the pandemic, the unavailability of these materials in health care institutions has been observed, leaving professionals more vulnerable to SARS-CoV-2 infection[17-18]. The same was found in textual segments of the present investigation, which referred to the scarcity and rationing of PPE.

An integrative literature review on the theme showed that the main form of contagion of COVID-19 among health professionals was the inappropriate use of PPE in their work environments[18]. In the same aspect, research conducted in Spanish-speaking countries in Latin America among physicians, nurses and other health professionals, also in the first wave of the pandemic, also identified limited access to PPE, including disposable gloves, disposable surgical masks, disposable aprons, N95 masks and total face masks[19].

It is therefore stressed that such equipment should not only be purchased in sufficient quality and quantity, but also properly maintained. Furthermore, to overcome the adversities identified herein, effective biosafety measures to prevent this disease should include the restructuring of new routines and operational and clinical flows in the services, the execution of monitoring of health professionals by comprehensive screening and traceability, and the systematic use of training to train teams to deal with this and other highly contagious diseases[18], envisioning the promotion of safe and quality care for all.

Another finding of the investigation referred to the urgent need for constant updating of knowledge about the disease, considering that the pandemic is not yet over and uncertainties remain about it. Therefore, to minimize the adversities identified in this study, managers and professionals are expected to continuously seek guidance based on evidence and competent health agencies, as well as on international protocols and guidelines, in order to promote safe care for patients, for themselves, for the team, for families, as well as for the community in general[20-21].

Thus, over time, a more detailed understanding of the disease tends to facilitate the decision-making by nurses at crucial moments of clinical practice, through the implementation of more appropriate management and therapeutic interventions[22]. This aspect was pointed out in a Spanish study, which found out that, in the second half of 2020, care for patients with COVID-19 was facilitated by increased knowledge about the disease, its transmission and its clinical management[12].

Still in accordance with the evidence found in the lexicographic analysis, the care of critical patients, who required intensive care during the pandemic, clearly required the acquisition of equipment and materials, such as mechanical ventilators, in addition to the expansion of beds in hospital units[23]. In different hospital units in the world and in Brazil, including in the state of Rio de Janeiro, this aspect was an obstacle. This reality was also accompanied by ethical conflicts related to the need to perform a clinical screening for the decision-making of rationing about which patients would be hospitalized and receive vital support, based on age and degree of chronicity or frailty[12].

The intensive care unit consists of a service of high complexity, in which the concern with suffering, pain and death are already an exhausting situation often experienced by the nursing team. However, the findings showed that, in the midst of the pandemic, the stress generated by caring for patients in severe conditions intensified, both by the complex care itself and by fear of contamination and by the imminent death among patients and colleagues.

This situation, reported by the participants, enhanced the emotional overload that, associated with work factors, sometimes exceeded the resources of nursing professionals, leading them to stress, one of the great consequences of this pandemic. This circumstance is corroborated in a study conducted in Minas Gerais, which detected burnout syndrome in a considerable portion of 25.5% among 94 nursing technicians who worked in the ICU and were on the front line in the COVID-19 pandemic[24].

Fear and stress among nursing professionals should be considered as predisposing factors to various health problems that affect their daily lives, since they generate physical, psychological and social damage, with numerous individual and family consequences, in addition to harming work activities. This reality imposes the need for timely psychological support and psychiatric treatment, with specialized care for affected professionals[5] during and after this pandemic.

The provision of physical and emotional support and guidance on prevention measures, essential for the management of fear and stress caused by work activities[25], both to improve care to patients and professionals, proved to be an important concern of study participants. Thus, an integrative review highlighted some possible coping strategies, such as reduced workload, increased rest period, effective communication, psychological evaluation and maintenance of contact with family members through social networks[8].

The limitations of the study refer to the use of an online form, which led to shorter and more objective responses among participants, and the scarcity of qualitative studies, which limited the discussion of the results. It is emphasized the need for investments in new research with other methodological designs, to expand the knowledge about the subject on screen.

Through the scientific method occurs progress in understanding the real adversities experienced by nursing professionals in intensive care units in times of COVID-19. Thus, it will become possible to strengthen public policies and management and care strategies that promote a reorganization of work processes, with emphasis on the necessary psychoemotional support, in addition to the adequate provision of PPE among workers who are on the front line, in Rio de Janeiro and other Brazilian states, not only in the pandemic period.

## Final considerations

The data indicated that the adversities reported by nursing professionals included the lack of knowledge of the disease, the high risk of contamination related to the care of critically ill patients, the constant need for guidance on preventive measures for the team and family members, the finding of deaths of patients and professionals and the lack of personal protective equipment, in the necessary quantity and quality, which together generated fear and stress reactions. In this context of emotional exhaustion, psychological support for the intensivist team has become an imperative need.

Adversities such as the lack of flows, protocols, information and materials, as well as training, denoted the importance of crisis management by managers, with improvements in the forecast and provision of human and material resources, as well as in the establishment of contextualized guidelines, with permanent training processes of the teams.

The adversities evidenced have directly influenced care practice in intensive care, as well as on the psychoemotional health of nursing professionals. They also represent the intensity with which the pandemic reached the high complexity care scenario, aggravating previous difficulties and imposing new confrontations. Thus, actions are still pressing to mitigate adversities and maintenance of biosecurity in this context during and after the pandemic.

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