

## Social representations of professional and personal self-protection for nurses in the Covid-19 context

*Representações sociais da autoproteção profissional e pessoal para enfermeiros no contexto da Covid-19*

*Representaciones sociales de la autoprotección profesional y personal para enfermeros en el contexto del Covid-19*

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### ABSTRACT

**Objective:** to analyze the social representations of professional and personal self-protection among nurses in the context of Covid-19. **Method:** a descriptive study with a qualitative approach, based on the Social Representations Theory, using a procedural approach. Thirty nurses who provided nursing care to Covid-19 patients in the State of Rio de Janeiro participated in the study. Data collection took place through semi-structured interviews between April and May 2021, conducted on an *online* platform. Data analysis was performed using the thematic-categorical content analysis technique. **Results:** The analysis resulted in four categories of social representations and practices related to challenges in coping with Covid-19: personal and professional self-protection; Care structure and flow and its relationship with professional self-protection. **Final considerations:** There was engagement of professionals in the use of PPE during the pandemic, indicating a concern regarding self-protection in providing care to patients with Covid-19.

**Keywords:** Covid-19; Nurses; Social Representation; Personal Protection.

### RESUMO

**Objetivo:** analisar as representações sociais da autoproteção profissional e pessoal dos enfermeiros no contexto da Covid-19. **Método:** estudo descritivo, com abordagem qualitativa, pautado na Teoria das Representações Sociais, abordagem processual. Participaram 30 enfermeiros que realizaram cuidados de enfermagem a pacientes com Covid-19, no Estado do Rio de Janeiro. A coleta de dados ocorreu por meio de entrevista semiestruturada entre abril e maio 2021, realizada em plataforma *online*. O tratamento dos dados foi realizado com a técnica de análise de conteúdo temático-categorial. **Resultado:** a análise resultou em quatro categorias: Representações sociais e práticas relativas a Covid-19; Representações sociais da autoproteção; Desafios no enfrentamento da Covid-19: autoproteção pessoal e profissional; e Estrutura e fluxo de atendimento e sua relação com a autoproteção profissional. **Considerações finais:** houve engajamento dos profissionais no uso dos EPI na pandemia, o que aponta uma preocupação quanto à autoproteção na prestação de cuidados à pacientes com a Covid-19.

**Descritores:** Covid-19; Enfermeiras e Enfermeiros; Representação Social; Proteção Pessoal.

### RESUMEN

**Objetivo:** analizar las representaciones sociales de la autoprotección profesional y personal de los enfermeros en el contexto del Covid-19. **Método:** estudio descriptivo, con enfoque cualitativo, basado en la Teoría de las Representaciones Sociales, enfoque procesal. Participaron 30 enfermeros que brindaron cuidados de enfermería a pacientes con Covid-19 en el Estado de Río de Janeiro. La recolección de datos se llevó a cabo a través de entrevistas semiestructuradas entre abril y mayo de 2021, realizadas en una plataforma *online*. El procesamiento de los datos se realizó mediante la técnica de análisis de contenido temático categorial. **Resultado:** del análisis surgieron cuatro categorías: Representaciones sociales y prácticas relacionadas con el Covid-19; Representaciones sociales de la autoprotección; Desafíos de enfrentar el Covid-19: autoprotección personal y profesional; y Estructura y flujo de atención y su relación con la autoprotección profesional. **Consideraciones finales:** los profesionales demostraron compromiso en el uso de EPP durante la pandemia, lo que indica que se preocupaban por autoprotgerse durante la atención a pacientes con Covid-19.

**Descriptores:** Covid-19; Enfermeras y Enfermeros; Representación Social; Protección Personal.

## INTRODUCTION

The world faced a significant pandemic experienced by humans caused by the SARS-CoV-2 virus, which leads to Covid-19, a disease derived from the virus. It was considered a global public health problem due to its high speed of dissemination and the large number of deaths it caused worldwide since 2020<sup>1</sup>.

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The Covid-19 pandemic brought about a series of social and economic repercussions worldwide, occurring at the same speed and to the same extent as various countries were affected by the disease worldwide, with greater damage to those that are poorer and less developed<sup>2</sup>.

In the health field, several problems were faced during the pandemic, such as precarious working conditions, lack of infrastructure, equipment, and basic supplies for health practices, among others. For health care professionals, some problems that were already present in Brazil were aggravated by the pandemic, such as long working hours, workload, low salaries, lack of training, and inadequate staffing levels, among others. As a result, the wear and tear experienced by this professional category was observed, leading to health repercussions, increased vulnerability, and consequent contamination and infection by the virus, as proven by the number of nursing workers affected by Covid-19<sup>3</sup>.

According to data from the Pan American Health Organization (PAHO), all countries and territories in the Americas reported cases of Covid-19 and deaths from the disease<sup>4</sup>. Health care professionals were constantly exposed to the coronavirus, and according to estimates from the WHO, between January 2020 and May 2021, 80 to 180 thousand health care professionals died from Covid-19<sup>5</sup>. In Brazil, according to data from the Special Epidemiological Bulletin, among the professions with the highest number of hospitalized cases of Severe Acute Respiratory Syndrome (SARS) due to Covid-19 were nursing technicians and assistants, doctors, and nurses<sup>6</sup>.

Given this context, it is important to understand the social representations of nurses regarding self-protection in Covid-19, as the pandemic has impacted the lives of these workers not only in the workplace but also in their social and family life. Therefore, this study objective is the social representation of professional self-protection in the context of Covid-19, aimed at analyzing the social representations of nurses regarding professional and personal self-protection against Covid-19.

## Theoretical Framework

As social representations are defined as: "common sense knowledge, constructed and mobilized in consensual universes, which often consist of transformations operated on information originating from reified universes<sup>7</sup>" and their study can allow for a better understanding of the relationships between nurses' ways of thinking and acting in pandemic situations. In this perspective, representations of professional and personal self-protection for nurses in Covid-19 can reveal the reality represented by professionals, as well as point to new possibilities for future actions.

This study used the processual approach, and in this approach, to understand the social representations of a group, it is necessary to investigate them through discourses and behaviors, expressed emotions and feelings, constructed cognitive contents, culture, and social relations among groups, as these are the main elements in the process of constructing a representation<sup>8,9</sup>.

## METHOD

The method employed in this study is a descriptive one with a qualitative approach, as it allows for understanding the complexity surrounding the studied object, enabling the exploration of its peculiarities and experiences<sup>10</sup>. It is based on the Theory of Social Representations (TRS) in its processual approach.

The selection and access to participants were carried out using the snowball technique. Described as "a form of non-probabilistic sampling that uses reference networks and referrals"<sup>11</sup>. The snowball technique was applied, considering the impracticality of conducting the research in person due to pandemic restrictions. A total of 30 nurses participated in the study. The inclusion criteria were nurses who provided care and assistance to patients with Covid-19, working at various levels of care complexity: primary, secondary, and tertiary.

Data collection took place between April and May 2021, using the online meeting platform Google Meet, with prior scheduling. The duration of each interview ranged from 20 to 30 minutes, and audio recordings of the interviews were made and subsequently transcribed. A thematic interview guide was used, consisting of a guiding question: "What are your experiences and perceptions of professional self-protection in the Covid-19 context?" and other topics related to the study's objective, such as feelings and meanings about Covid-19 and self-protection, care practices, difficulties, and challenges experienced during the Covid-19 pandemic. Additionally, a questionnaire for sociodemographic characterization was employed.

Data analysis in this study followed the thematic-categorical content analysis technique. This technique enables a methodologically oriented qualitative research practice, in a systematic process with scientific value, distinguishing it from merely intuitive analysis<sup>12</sup>.

The steps used for the analysis were as follows: Floating reading; Definition of provisional hypotheses; Determination of recording units (RU); Highlighting of RUs throughout the text; Definition of units of meaning (UM) or themes; Quantification of units of meaning in each corpus; Construction of categories; Naming of categories; Quantification of categories; Description and discussion of categories<sup>12</sup>.

The project was approved by the Research Ethics Committee, and all participants in this study signed the informed consent form.

## RESULTS AND DISCUSSION

The characterization of the participants revealed a predominance of females (19). Regarding the age of the participants, it is observed that the age group with the highest prevalence was 35-39 years old (10). In this study, the majority of nurses have only one job (16). Regarding the years of professional experience, it is noted that among the 30 nurses, most participants have been working in the profession for a decade or more (10). The majority of participants are involved in secondary care (15).

The analysis of interview data resulted in 1,631 recording units. These recording units were distributed into 82 units of meaning, aggregated into 04 categories, named as: Social representations and practices related to Covid-19; Social representations and practices of professional and personal self-protection; Challenges in facing Covid-19: professional and personal self-protection; Structure of care and professional self-protection.

### Category 1: Social representations and practices related to Covid-19

This category deals with the representational contents of Covid-19 and the activities carried out by nurses during patient care practices in the Covid-19 pandemic. The category consists of 475 RU, which corresponds to 29.10% of the analyzed corpus, and two subcategories: Meanings of Covid-19 for nurses, which has 15 UM (243 RU); Nurses' roles in facing Covid-19, which has 11 UM (232 RU).

#### *Meanings of Covid-19 for nurses*

This subcategory presents the different meanings associated with Covid-19 for nurses and has 15 UM, 243 RU, corresponding to 14.90% of the RU of the total analyzed corpus.

*Covid-19 perceived as negative in its aspect of fear evoked in professionals is evidenced in the RU below:*

*Today, my representation facing this disease is a representation of fear. (E01)*

*Today, for me, working on the front line means working with fear of getting infected, as I have already been infected twice. (E01)*

*Fear of contaminating my family, a lot of fear of getting infected myself, a lot of fear of what this disease could lead to in the long term. (E010)*

A study on the social representations of Covid-19 for nurses identified that "fear" was the central element of representation among nursing professionals. According to the author, fear may be associated with the risk of workers being infected with coronavirus and developing the disease, as well as the fear of death<sup>13</sup>.

It is observed in the participants' statements and in scientific literature that fear of Covid-19 was a feeling experienced by nurses during the pandemic. It is evident that such a feeling is related to the concern of the professional about their own biosafety, due to the shortage of supplies and equipment, concern about their own contagion, as well as the concern of nurses about transmitting the virus to family and friends.

The perception of Covid-19 as something new, unpredictable, and uncontrollable can be observed in the participants' discourse:

*Because every day there is a new strain, every day something new emerges. (E03)*

*Because it's new, it's unknown. (E10)*

*But it was a new disease, it was a new enemy that we didn't know what we were facing yet. (E011)*

The social representation of Covid-19 for nurses is still in the process of construction. The social isolation imposed by the pandemic has made scientific production on the topic difficult, causing insecurity in their professional practice<sup>13</sup>. In light of the above, it is important to understand that the social representations of Covid-19 may still be in the process of anchoring among the group of nurses. It is observed that the participants are still in the process of seeking and assimilating information about the disease and the virus, as well as constructing images, symbolizations, and attitudes towards the illness.

In this study, it is observed that nurses associated Covid-19 with the "new," "new disease," "unknown." These meanings may express the moment experienced by professionals at the beginning of the pandemic, when there was not much information about the virus, its treatment, and transmission methods. Another important point to highlight is the media presenting the virus as new, leading to this attribute being associated with SARS-CoV-2.

### *Nurses' Performance in Facing Covid-19*

This subcategory addresses the professional experience of nurses in carrying out their daily care activities in dealing with Covid-19, with 11 UM, 232 RU, corresponding to 14.20% of the corpus.

The following are the participants' experiences in caring for Covid-19 patients:

*We are still attending to Covid patients, from risk assessment to the hospitalization process, including orotracheal intubation in emergency cases. (E01)*

*And the severe Covid patient, their management is somewhat complicated because they can decompensate with any manipulation; their hemodynamic pattern worsens a lot. (E011)*

According to the literature, the Covid-19 pandemic has brought about a series of changes and adaptations in some care processes. In view of this, nursing professionals needed to adapt to the new reality. These professionals performed activities ranging from welcoming patients arriving at the health service with Covid-19 symptoms to isolating patients and accommodating them in the designated sectors, providing nursing care from risk assessment to the care of critically ill patients, using respiratory support<sup>14</sup>.

The Covid-19 pandemic brought repercussions to the entire world, especially for health care professionals who had to work on the front lines while the entire population was in social isolation. These circumstances caused doubts, uncertainties, and fear. In this context, professionals needed to seek information to acquire knowledge about the virus and the disease, as well as to master protective practices and provide health care.

## **Category 2: Social Representations and Practices of Professional and Personal Self-Protection**

The second category reflects the social representations of personal and professional self-protection for nurses and encompasses 568 RU. For better understanding and delineation, this category was divided into two subcategories: Meanings of professional and personal self-protection for nurses, which includes 9 UM (242 RU); and practices adopted by nurses for personal and professional self-protection, which includes 10 UM (316 RU).

### *Meanings of professional and personal self-protection*

This subcategory presents the representational contents of nurses regarding professional and personal self-protection and includes 9 UM, 242 RU, representing 14.80% of the corpus.

Regarding professional self-protection, nurses perceive it as the use of PPE and hand hygiene, as observed in the professionals' statements:

*It is about using PPE equipment that is key. (E16)*

*It would be the use of PPE, such as masks, goggles. (E02)*

*Well, self-protection for me is the issue of PPE. (E29)*

*It would be the appropriate use of health technologies, such as hand hygiene. (E01)*

In a study conducted on professional self-protection and nursing care for people living with HIV, it was shown that professionals associated self-protection against occupational risks with the use of PPE and the adoption of standard precautions with all patients, regardless of the diagnosis<sup>15</sup>.

In a study conducted on hand hygiene adherence, it was identified that infection control and personal protection of the professional were the most important elements in adhering to this technique<sup>16</sup>. In other words, self-protection is one of the main reasons why professionals perform hand hygiene.

### *Practices adopted for professional and personal self-protection*

This subcategory encompasses the actions, as represented by nurses, for self-protection and for the protection of others, both within and outside health care facilities, including at home. These practices, mentioned or represented, particularly focused on protecting others, developed in the family environment. They allow for a better understanding of the category in the following units of meaning:

*"So, when I get home, I immediately put my clothes to wash." (E01)*

*So I try to change clothes when I leave the unit, when I get home, I try not to enter with the same clothes, I already put them straight to wash, shoes also I don't enter the house wearing them, I clean them before. (E02)*  
*I have this care of changing clothes before I get home. (E05)*

The results show a change in nurses' behavior in their routine upon returning home, where it became necessary to adopt precautions with the clothing and footwear used in the hospital environment, demonstrating professionals' concern about not contaminating their families. This concern is directly linked to the fear of Covid-19, as nurses' professional practice involves exposure to biological risks. However, with the Covid-19 pandemic, precautions have been incorporated into the routine.

Changes in daily practices were also identified in a study conducted with health care professionals about personal and professional changes due to the pandemic. In this research, it was found that changes in habits by professionals at home corresponded to habits of hand hygiene, cleaning clothes, and objects. The clothes were washed separately from those of other family members, accompanied by changing shoes before entering the house. All these precautions were taken to protect family members<sup>17</sup>.

Professional self-protection has always been part of the daily lives of nurses and health care professionals. However, with the advent of the Covid-19 pandemic, this topic has gained greater importance. In this context, the meaning of self-protection for nurses is directly linked to the use of PPE. Another important point to spotlight is regarding the practices used by nurses outside the workplace, which demonstrates professionals' concern for caring for others.

### Category 3: Challenges in confronting Covid-19: professional and personal self-protection

The third category addresses the challenges faced by nurses during their work in the Covid-19 pandemic, both in the field of professional self-protection and regarding personal self-protection. This category comprises 476 units of meaning, corresponding to 29.20% of the corpus. In its organization, it was divided into two subcategories: challenges in confronting the pandemic with 17 UM (321 RU), and challenges related to professional and personal self-protection with 12 units of significance (155 RU).

#### *Challenges in confronting the pandemic*

Participants' statements reveal that the lack of knowledge about Covid-19 was one of the most significant representational contents of the subcategory, pointing to the environment of uncertainty that guided the confrontation of the pandemic and caregiving practices.

*We still know very little, and it's only in the medium to long term that we will truly understand what this disease is capable of. (E01)*

*It's a condition where the prognosis remains uncertain; it could be bad. (E02)*

*Because at the beginning, everything was very uncertain, everyone said something different, we weren't really sure about anything, about what would happen to these patients. (E03)*

The SARS-CoV-2 virus quickly spread worldwide, leading to the Covid-19 pandemic. The disease caused by the coronavirus has impacted the lives of millions of people. For health care professionals, it has been a significant challenge to treat individuals infected with the virus, as there was limited information available about the pathogen, its transmission, evolution, and the disease itself. It is emphasized that knowledge about Covid-19 is fundamental for health care assistance and prevention, referring to the essential reified knowledge for the instrumentalization of work practices.

In a study conducted with ICU nursing professionals, "the lack of in-depth knowledge about the disease, its treatment methods, and means of dissemination... were identified as triggering elements of emotional responses among professionals<sup>18</sup>" Thus, the importance of scientific knowledge for the development of safe care practices for both professionals and patients is observed.

#### *Challenges related to professional and personal self-protection*

This subcategory presents the challenges faced by nurses regarding professional and personal self-protection. It consists of 155 units of meaning, corresponding to 9.50% of the corpus. It comprises 12 units of significance.

Nurses face daily challenges regarding professional self-protection; however, with the advent of the Covid-19 pandemic, these challenges have been exacerbated. Some UM reveal one of the highlighted difficulties faced by professionals: the unavailability of PPE, serving as representational content and allowing for a better understanding of the category:

*We didn't have personal protective equipment; we intubated patients with respiratory failure without any protection. (E03)*

*And especially, regarding the lack of PPE, because initially, we had that moment of price increase for PPE materials. (E04)*

In a study conducted with nursing professionals during the pandemic, it was observed that the absence or non-compliance of PPE triggered fear of contamination and anguish among Brazilian nursing professionals, but also impacted caregiving practices. The nursing team needed to establish physical distancing from patients, affecting direct contact, empathetic attitude, and relational care.<sup>19</sup>

The lack of knowledge about the virus, treatment, and prevention was one of the major adversities faced by professionals. In this sense, nurses needed to seek access to information through training, protocols, websites, journals, among other means of communication. Additionally, the lack of PPE had a significant impact on biosafety and the provision of care. Professionals had to ration materials and equipment to ensure that care was not compromised.

#### Category 4: Structure and workflow in health care delivery and its relationship with professional self-protection

The fourth category presents the description and evaluation of nurses regarding the structure and workflow developed in health care units during the Covid-19 pandemic.

Health care units have distinct structures and workflows; however, they must all adhere to regulations established by legislation and health and sanitation regulatory agencies. The workflows and structures of health care delivery are intimately related, and these, in turn, affect safety and professional self-protection. When there are failures in this chain, the implementation of self-protection mechanisms is compromised.

*At the beginning, we didn't have any structure at all. (E03)*

*We had difficulty with the structure, not having anywhere to refer this person to. The hospital was so full that there was nowhere to go. (E015)*

The lack of infrastructure in health care services can bring about drawbacks for both patient and professional safety. Physical infrastructure is a fundamental part of the health care work process and directly affects the quality of care provided. Therefore, it is crucial that structural conditions meet the care needs and comply with the requirements set by competent authorities and good biosafety practices. It is noteworthy that infrastructure problems jeopardize the health of workers and lead to dissatisfaction during work activities, both for professionals and patients<sup>20</sup>.

Given the relationship between structure and workflows with the biosafety of professionals, one can observe the difficulties that nurses needed to face regarding professional and personal self-protection. During care delivery, they needed to be creative in overcoming challenges, by creating protocols and making the best possible use of physical space and resources.

#### FINAL CONSIDERATIONS

As social representations of Covid-19 and professional and personal self-protection point to the fragility of professional self-protection processes observed during the pandemic, the gap in scientific information about the disease and the virus observed throughout the pandemic, and the psychosocial effects resulting from a situation of social and institutional calamity instigated during the pandemic period.

Nurses understand professional self-protection as the use of PPE, but also associate it with hand hygiene and measures for preventing the infection of the professional. Regarding personal self-protection, it relates to care in one's own residence, associated with concerns about contaminating friends and family and adopting hygiene procedures aimed at this protection.

It is concluded that there was engagement of professionals in the use of PPE during the pandemic, which indicates a concern for self-protection in providing care to patients with Covid-19. Further studies are necessary to strengthen these findings.

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#### Authors' contributions

Conceptualization, P.M.C.C. and D.C.O.; Methodology, P.M.C.C. and D.C.O.; Validation, P.M.C.C. and D.C.O.; Formal Analysis, P.M.C.C., R.L.M.S. and J.P.D.; Investigation, P.M.C.C. and D.C.O.; Resources, D.C.O.; Data Curation, D.C.O. and Y.Y.M.; Manuscript Writing, P.M.C.C., R.L.M.S., J.P.D. and Y.Y.M.; Writing – Review and Editing, D.C.O. and Y.Y.M.; Visualization, D.C.O. and Y.Y.M.; Supervision, D.C.O.; Project Administration, D.C.O.; Funding Aquisition, D.C.O. All authors read and agreed with the published version of the manuscript.