$\odot$   $\odot$ 

**REFLECTION | REFLEXÃO** 



## Labour, ethical and political dimensions of nursing staff sizing in the face of COVID-19

Dimensões laborais, éticas e políticas do dimensionamento de pessoal de enfermagem diante da COVID-19

Dimensiones laborales, éticas y políticas del dimensionamiento del personal de enfermería frente a la COVID-19

#### ABSTRACT

**Aim**: To propose a broader discussion on dimensions involving the sizing of nursing staff, articulating them to the reality of the pandemic by COVID-19. **Method**: Theoretical-reflexive essay subsidised by technical-scientific material and allusions about the labour, ethical and political dimensions/repercussions of the (sub)dimensioning of nursing staff and the reality that the context of the pandemic highlighted in the dynamics of management of people in the category. **Results:** the reflection was guided by two axes: *Dimensions of nursing staff sizing and the scenario aggravated by COVID-19; and, Providing nursing staff after COVID-19: is there optimism*? **Final considerations and implications for practice:** the health situation expressed by COVID-19, in Brazil, seems to evidence for society the high workload and the quantified inadequacy of nursing professionals. This has reinforced the ambivalence of strengths and weaknesses of the dimensions involving the interests of the profession, class entities, government bodies, academia, managers/institutions, as well as society as a whole, is configured as a political means of unfolding the dimensioning of nursing professionals and having an ethical and positive impact on the working conditions of the category, as well as favouring the quality of care.

Keywords: Personnel downsizing; Workload; Coronavirus infections; Nursing, team; Personnel management.

#### RESUMO

Objetivo: propor discussão ampliada a respeito de dimensões que envolvem o dimensionamento de pessoal de enfermagem, articulando-as à realidade da pandemia por COVID-19. Método: ensaio teórico-reflexivo subsidiado por material técnico-científico e alusões acerca das dimensões/repercussões laborais, éticas e políticas do (sub)dimensionamento de pessoal de enfermagem e a realidade que o contexto da pandemia salientou na dinâmica de gestão de pessoas da categoria. **Resultados**: a reflexão foi conduzida por dois eixos: *Dimensões do dimensionamento de pessoal de enfermagem e o cenário agravado pela COVID-19;* e, *Provimento de pessoal de enfermagem pós COVID-19: há otimismo?* **Considerações Finais e implicações para a prática**: a situação sanitária expressa pela COVID-19, no Brasil, parece evidenciar para a sociedade a elevada carga de trabalho e a inadequação quantiqualitativa de profissionais de enfermagem. Isso reforçou a ambivalência de fortalezas e fragilidades das dimensões que envolvem os meios de previsão e provisão de recursos humanos. Numa proposição otimista, acredita-se que a articulação dos interesses da profissão, entidades de classe, órgãos governamentais, academia, gestores/instituições, além da sociedade como um todo, configura-se como um meio político de desdobrar o dimensionamento de profissionais de enfermagem e repercutir ética e positivamente nas condições laborais da categoria, além de favorecer a qualidade do cuidado.

Palavras-chave: Dimensionamento de pessoal; Carga de trabalho; Infecções por coronavirus; Equipe de enfermagem; Administração de recursos humanos.

#### RESUMEN

**Objetivo**: Proponer una discusión ampliada sobre las dimensiones que involucran el dimensionamiento del personal de enfermería, articulándolas a la realidad de la pandemia por COVID-19. **Método**: ensayo teórico-reflexivo subsidiado por material técnico-científico y alusiones acerca de las dimensiones/repercusiones laborales, éticas y políticas del (sub)dimensionamiento del personal de enfermería y la realidad que el contexto de la pandemia destacó, en la dinámica de gestión de personas de la categoría. **Resultados**: Dos ejes, condujeron la reflexión: *Dimensiones del dimensionamiento del personal de enfermería y el escenario agravado por la COVID-19*; y, *Provisión del personal enfermería después de la COVID-19*: ¿*Hay optimismo?* **Consideraciones Finales e implicaciones para la práctica**: La situación sanitaria expresada por la COVID-19, en Brasil, parece evidenciar para la sociedad, la elevada carga de trabajo y la inadecuación cuanticualitativa de los profesionales de enfermería. Esto reforzó la ambivalencia de fortalezas y las fragilidades de las dimensiones que involucran los medios previsión y provisión de los recursos humanos. Desde un punto de vista optimista, se cree que la articulación de los intereses de la profesión, entidades de clase, órganos gubernamentales, academia, gestores/instituciones e incluso de la sociedad como un todo, constituye un medio político para desdoblar el dimensionamiento de profesionales de enfermería y repercutir ética y positivamente en las condiciones laborales de la categoría, además de favorecer la calidad del cuidado.

Rúbia Marcela Rodrigues Moraes<sup>2</sup> Ana Maria Müller de Magalhães<sup>3</sup> Anair Lazzari Nicola<sup>4</sup> Denilse Damasceno Trevilato<sup>5,6</sup> João Lucas Campos de Oliveira<sup>3</sup>

Juliana Aparecida Peixoto Nishiyama<sup>1</sup> 💿

Universidade Federal de Mato Grosso,
Faculdade de Enfermagem, Programa de
Pós-Graduação em Enfermagem. Cuiabá, MT,
Brasil.

Hospital Universitário Júlio Müller,
Programa de Pós-Graduação em Ciências
Aplicadas à Atenção Hospitalar. Cuiabá, MT,
Brasil.

 Universidade Federal do Rio Grande do Sul, Escola de Enfermagem. Porto Alegre, RS, Brasil.

 Universidade Estadual do Oeste do Paraná, Programa de Residência em Gerenciamento de Enfermagem em Clínica Médica e Cirúrgica. Cascavel, PR, Brasil.

5. Universidade Federal do Rio Grande do Sul, Escola de Enfermagem, Programa de Pós-Graduação em Enfermagem. Porto Alegre, RS, Brasil.

6. Hospital Moinhos de Vento. Porto Alegre, RS, Brasil.

Corresponding author:

Juliana Aparecida Peixoto Nishiyama. E-mail: julynishiyama@gmail.com.

Submitted on 09/09/2020. Accepted on 11/10/2020.

DOI:https://doi.org/10.1590/2177-9465-EAN-2020-0382

Palabras clave: Reducción de personal; Carga de trabajo; Infecciones por coronavirus; Grupo de enfermería; Administración de personal.

### INTRODUCTION

In December 2019, in the Chinese city of Wuhan, Hubei province, there was an increase in cases of the severe acute respiratory syndrome, whose aetiology, at first unknown, was later related to the appearance of a new type of coronavirus, SARS-CoV-2.<sup>1</sup> The disease caused by this etiological agent was defined as *coronavirus disease-2019* (COVID-19) which, in addition to its high transmissibility, has clinical characteristics ranging from fever and dry cough to respiratory failure, multiple organ failure and/or septic shock.<sup>2</sup>

On 30 January 2020, the World Health Organization (WHO) considered COVID-19 to be a Public Health Emergency of International Importance (PISH),<sup>3</sup> as China registered 7,734 cases on the same date, and another 90 cases were reported in countries such as Australia, Canada, Finland, France, Germany, Singapore, Republic of Korea, United Arab Emirates, United States of America (USA), Philippines, India, Taiwan, Thailand, Vietnam, Malaysia, Nepal, Sri Lanka, Cambodia and Japan.<sup>4</sup> On 11 March 2020, the WHO classified the situation of COVID-19 as a pandemic.3 Faced with this reality, government leaders, local and international health agencies at different levels have drawn up contingency plans to try to reduce the social and health impact of the potentially catastrophic context.<sup>3,5</sup>

The WHO recorded 50,266,033 confirmed cases of COVID-19 as of 9 November 2020, with 1,254,567 deaths.<sup>6</sup> To date, the US had the highest prevalence of confirmed cases (9,763,730) and deaths (235,562); India ranked second in confirmed cases (8,553,657) and Brazil third, with 5,653,561 diagnoses. However, Brazil is second in the world in the number of deaths (162,269).<sup>6</sup>

Among the alarming statistics of COVID-19, it is recorded that 42,538 thousand nursing professionals in Brazil were contaminated by the new coronavirus, with 460 deaths, which represents a lethality of 1.94% among workers in the area.<sup>7</sup> The largest volume of cases occurred in the Southeast (33.15%) and Northeast (29.72%); the female sex (85.03%) was the most affected, and the predominant age group was from 31 to 40 years (17,825).<sup>7</sup>

According to the Federal Council of Nursing (COFEN) and the *International Council of Nurses* (ICN), Brazil is the country with the most deaths of nursing professionals by the new coronavirus in the world.<sup>8</sup> This fatal reality is sharpened by the working conditions repeatedly cited as precarious for Brazilian nursing workers, which became even more evident in the context of the COVID-19 pandemic.<sup>9</sup>

According to a report by the WHO and the ICN, there are about 28 million nursing professionals in the world,<sup>10</sup> and Brazil, approximately 2.2 million workers are working in different areas and regions.<sup>7</sup> Although this figure stands out in an absolute comparison of nursing with other professional categories, it is estimated that there is a deficit of almost 6 million nursing workers in the world, particularly in Africa, South East Asia and the Eastern Mediterranean region (WHO region), as well as some parts of Latin America.<sup>11</sup> This scenario highlights the need for means and instruments of rational and satisfactory forecasting of nursing personnel, such as sizing.<sup>12,13</sup> Currently, in Brazil, the parameters used for the sizing of the nursing staff follow the COFEN<sup>12</sup> Resolution 543/2017 which, in the thesis, can guarantee the adequate forecast of personnel in different practice scenarios. However, inadequacies about this or even the very elevation of the nursing workload are frequently verified facts.<sup>13-15</sup>

Disability of strength and working conditions in nursing seems to be in vogue in the context of the COVID-19 pandemic. Throughout the world, there are significant contamination rates<sup>9</sup> among this population, which is particularly affected by acting on the "battlefront", and which also experiences situations related to increased workload, lack of rest, lack of personal protective equipment (PPE), the constant fear of contaminating family members, misinformation of society and dissatisfaction with government actions, health systems and population.<sup>16,17</sup>

Given the continuous commitment to provoke a debate that may ground an increase in better working conditions for nursing, which becomes unavoidable in the context of the current pandemic and also for the expected posterity, this theoretical-reflexive essay aims at proposing a wider discussion on the dimensions involving the dimensioning of nursing staff, articulating them to the reality of the pandemic by COVID-19.

### METHOD

Theoretical-reflexive essay, anchored in technical-scientific material about the pandemic by COVID-19, and, mainly, in the dimensions and repercussions in the workload and the (sub) dimensioning of nursing staff in this emerging context, in the previous and aggravated scenario, as well as in future glimpses. This occurred especially in the Brazilian context since there is an organization of the profession's work in the country, as well as means of providing and administering human resources for identity nursing.

The reflective allusions/inferences proposed emanated from the junction of the interpretation of scientific data and technical material of COFEN with authorial experience. In this sense, the reflection was supported by researchers with experience in nursing management and postgraduate students at master's and doctorate levels, based in the states of Rio Grande do Sul, Mato Grosso and Paraná.

To meet the proposed objective in a systematized manner, the text was organized and developed in two guiding axes, thus labelled: *Dimensions of nursing staff and the scenario aggravated by COVID-19; and, Providing nursing professionals after COVID-19: is there optimism?* 

### **RESULTS AND DISCUSSION**

## Dimensions of nursing staff sizing and the scenario aggravated by COVID-19

Nursing is essential and reputed to be essential in health care worldwide.<sup>18</sup> It corresponds to half of the health workers in Brazil and inserts more than 2 million professionals at a

higher level (23%) and medium level (77%) in health care in the national territory. For this reason, it is impossible to consider the development of the work of health institutions without their action.<sup>18</sup> On the other hand, the quantiqualitative deficit of human capital (under dimensioning) - here understood as one of the *labour dimensions* of the dimensioning of nursing personnel - is a clear reality that persists in time in many practice scenarios,<sup>19</sup> and something on the screen, even by the media, in the context of today's pandemic.

A study<sup>20</sup> conducted in Belgium, England, Finland, Ireland and Switzerland, with 13,077 nurses, found that the inadequate number of professionals associated with the greater number of patients assisted can lead to work overload, professional dissatisfaction and *burnout*. To patients, this imbalance can lead to increased adverse events and higher mortality rates.<sup>21</sup> This reality clearly outlines the need for nurses, nursing managers, class entities, and researchers to (re)plan continuously mean of forecasting and staffing, such as sizing.

The dimensioning of nursing staff is a method of forecasting (planning) of professionals in the area, which, in Brazil, are properly projected in number and professional category to meet a certain demand of clientele with quality and safety, in addition to permeating a means of enabling better working conditions.<sup>12,13,20</sup> Despite its relevance and possible effectiveness as an instrument for managing people, there is a shortage of nurses throughout the country, especially in the interior, since 56.8% live and work in the capitals, which harms the performance of this professional in favour of the quality of care, and encourages an overload for nurses in the interior.<sup>19</sup> Even in medium-sized or large cities and in regions of high population density, such as the Southeast and South, shortcomings are reported in the suitability of nursing professionals (especially higher education) at different levels of care complexity.<sup>13-15</sup>

With the COVID-19 pandemic, nursing reaffirms its importance, both by having the largest contingent of health professionals who are uninterruptedly providing patient care and by possessing technical expertise and a holistic view of care.<sup>18</sup> The WHO has stated that without nursing action it will not be possible to combat the pandemic, as well as unlikely to achieve the Sustainable Development Goals (SDS) and universal health coverage.<sup>11</sup> However, thousands of health and nursing professionals in Brazil and countries such as China and Italy have been withdrawn from their work because they have acquired COVID-19, and many have died as a result of the virus,<sup>21,22</sup> which reinforces that without adequate provision and provision of nursing workers, confronting the pandemic becomes even more challenging (or unworkable).

The increased demand for patients per nursing worker (hence the increased workload) greatly compromises the quality of care and patient safety and is statistically associated with longer hospital stays, increased urinary infection related to invasive procedures, and reduced patient satisfaction with nursing care.<sup>23</sup> Also, the overload of work has repercussions on the feeling of powerlessness, dissatisfaction and demotivation in professionals.<sup>24</sup> As a result of the reduction in the number of workers in the pandemic due to absenteeism and illness, in addition to work overload, nursing professionals express friction and shear injuries as a consequence of the uninterrupted use of PPE, in particular, N95/PFF2 masks, goggles and the shield face,<sup>25</sup> used for long working hours which, although necessary to cope with COVID-19, are a possible reflection of the shortage and/or inadequacy of professionals before this context.

The workload becomes ostentatious in the face of institutional demands and the quality of care provided. Moreover, it is recognized that it is not atypical for nursing professionals to work more than 60 hours a week<sup>26</sup> and/or to be under their responsibility an excessive number of patients to provide care.<sup>23,27</sup> In today's scenario of intense changes, this is perhaps even more acute, since it is common for nursing workers to have to give up or postpone some means of the quality of life at work (such as holiday planning), as well as see themselves in the need to attend not only a sharp volume of patients but also an unknown clientele that demands peculiar care.

The low value and visibility of the nursing profession are evidenced by the strenuous working hours, scarcity of inputs, burdening of workers, unhealthy working conditions, scrapping of institutions, in addition to the low pay<sup>19,28,29</sup> that influences professionals to have multiple employment ties. As a result, the inefficiency of workers in implementing safe, quality assistance and physical and psychological exhaustion are favoured.<sup>30</sup> As a result of these and other factors, in the current pandemic and even outside it, professionals are no longer absent from work (absenteeism) but are present even under physical and/or psychological illness or limitation (presentism).<sup>31</sup> Thus, it appears that the multiple working hours and the quantitative deficiencies of nursing staff were intensified in the context of a pandemic by COVID-19, which imposed other adversities on work, thus possibly leading to the illness of professionals.

The Pan American Health Organization (PAHO), to mitigate the harm to health professionals caused by the pandemic, recommended conducts that include training workers to restrict contamination, providing IPE and psychosocial support to diagnose pathologies, stress and *burnout*, ensuring adequate working hours, rest, as well as payment of wages without delay, overtime and medical leave.<sup>32</sup> On the other hand, and especially in Brazil, it can be seen that nursing professionals have been faced with a shortage of PPE, inputs and training, inappropriate human resource sizing, and low pay; and, in this regard, researchers allude to the need for effort and mobilization on the part of the representative bodies of the class with the government to establish means that can guarantee better working conditions.<sup>33</sup>

A study conducted in China with health professionals who faced the COVID-19 pandemic identified psychological problems such as depression, anxiety, insomnia and distress.<sup>34</sup> These professionals are exposed to additional stressors such as the risk of becoming infected and contaminating others, especially their families; increased work responsibilities (work overload and meeting an unknown demand); and reduced self-care due to insufficient time and willingness.<sup>35</sup> Thus, it is noted that, although the pandemic brings several additional responsibilities and demands than usual, the inadequacy of nursing staff can be a further factor contributing negatively to the resilience of workers facing it.

Because of the overcrowding of the admission units, including campaign beds, COFEN<sup>36</sup> established minimum parameters for the sizing of the nursing team for the care of patients infected by COVID-19 in intensive care units (ICU), semi-intensive, general and campaign hospitals. As it is a disease with a clinical profile under construction, patients in inpatient units should be initially classified as intermediate care, requiring six hours of nursing care/patient/day. This considered the calculation results in a staff size composed of a percentage of 33% (minimum of six) nurses, in the 24 hours, every 20 hospital beds and adjusted to the team's weekly contractual workload.<sup>36</sup>

It is considered that the COFEN strategy mentioned above deals with an *ethical dimension* (inherent to the profession as a class) of the sizing of nursing professionals in the context of a pandemic; since, although of an emergency nature and empirical basis (as COFEN<sup>36</sup> itself assumes), it corresponds to a response from the class entity regarding a search to provide minimum parameters for the adequacy of the number and qualification of expected workers to the demand imposed by COVID-19. No less important, besides the qualification in terms of professional category determined by the dimensioning, it is considered that the qualification of the professionals under the perspective of training is essential for the dissemination of knowledge, considering that the permanent education, articulated to the implementation of protocols and the *praxis* based on evidence, contributes to the improvement of nursing.<sup>37</sup>

Even with COFEN's dispositions, it is common to be linked by the media, for example, that in the current pandemic scenario there is a shortage of trained professionals with experience in the adequate management of equipment and complex nursing care for critically ill patients with COVID-19, in addition to an insufficient number of workers already observed several times in many practice scenarios before the pandemic.<sup>13-15</sup> Another related aspect in the media during the pandemic period was the impossibility of opening some emergency services due to insufficient and/or non-existent human and other resources needed for care. As a result, this scenario contributes to the increased overload of professionals on this front, either because of the physical and/or emotional/mental burden, given that many professionals had to be relocated due to the need for the services and began to carry out complex activities that were not part of their daily lives.38

According to the Normative Opinion 02/2020 of COFEN,<sup>36</sup> in the care of patients infected by COVID-19 and admitted to the ICU, the team should be composed of, at least, one nurse every five beds, one nursing technician every two beds and one more nursing technician to support the existential activities every five beds, in all work shifts. In semi-intensive units, the stipulated ratio is one nurse for every eight beds, one nurse technician for every two beds and one more mid-level professional to support every eight beds in every shift.  $^{\rm 36}$ 

The number of nursing workers should be assured to meet the needs of the patients, however, the increased rate of absenteeism and presentism during the pandemic<sup>39</sup> may lead to increased risk to the patient and sickening of the nursing staff by the excessive workload. In this sense, in the context of critical care, an Italian survey identified that the workload of the nursing team measured by the Nursing Activities Score (NAS) was significantly higher when caring for patients with COVID-19.<sup>40</sup>

Another particularity that unfolds in the dimensioning of nursing professionals in the pandemic is the fact that COFEN has established a technical safety index (TSI) of 20%, due to the significant increase in the distances from this professional category,<sup>36</sup> a figure that differs from the minimum parameter established outside the context of the pandemic, which is 15%.12 The purpose of the TSI is to assign an additional value to the nursing staff to cover expected and unanticipated absences from the team<sup>12</sup> which, in the context of a pandemic, due to overwork and dismissal/admission of workers, increased proportions of absences are expected. More than this, it is important to note that a recent study conducted before the advent of COVID-19 in the interior of São Paulo estimated an TSI around 40% (42% for nurses and 38% for nursing technicians),41 i.e., even outside the context of the pandemic, absenteeism is a clear reality of nursing and may be related to workload and understaffing.42

There is an estimated deficit of 23,961 nursing professionals in Brazil, 8,430 nurses and 15,531 technicians/auxiliaries,<sup>41</sup> which hampers the adequate response to the COVID-19 pandemic in the country and care outside it. During the pandemic, 8,680 complaints were received by the Regional Nursing Councils, which referred especially to the shortage of PPE, followed by the shortage of nursing professionals.<sup>43</sup> Furthermore, a study identified that Brazil, Spain and Portugal have similar difficulties concerning the shortage of nurses and material resources,<sup>31</sup> which signals that the problem of quantitative and/or qualitative adequacy of personnel is not exclusive to Brazil.

It is postulated that there are **political dimensions** of nursing dimensioning in the pandemic scenario, as well as in non-pandemic context since it is noticeable that the adequacy and provision of the category's workforce also pass through the decision making spheres which tend to extrapolate the direct interests of nursing professionals and/or leaderships. That is, even if in a correlated and even "veiled" way, there are macro and micropolitical movements which can affect the adequacy of the number and qualification of nursing workers available and work in decent working conditions.

The Constitutional Amendment No. 95, sanctioned in 2016,<sup>44</sup> which froze public spending for 20 years and eminently impacts the Single Health System (SUS) may interfere with the provision of nursing professionals, which stresses the burden of work. In the context of the pandemic, it is prudent to emphasize that due investment in SUS is essential for the diagnosis of coronavirus infections and their restriction, among other diseases,<sup>45</sup> which

includes the adequate forecasting and provision of nursing human capital, since it acts incisively and indispensably in these battles.

The Provisional Measure (MP) 927/2020,<sup>46</sup> in turn, relaxes labour laws to combat the pandemic, adapts over time, the suspension of safety and health requirements and amends labour regulations: previously, 24 hours' work was provided for, with the MP, 24 hours' work is granted with 12 hours' rest.<sup>46</sup> In this sense, although it is pertinent to reflect on emergency measures to confront the pandemic, what is proposed here is to reaffirm how much nursing is exposed to precariousness in the event of failure to meet the requirements of professional suitability, which can be made possible by the size.<sup>47</sup> In other words, what seems to be, on the one hand, measures alter the work dynamics of the profession as a form of response to the epidemiological situation, and, on the other hand, it is seen as a prolonged lack of structural support, here focusing on that related to the provision of human resources.

The Project of Law (PL) nº 2295/2000, which has been debated and analyzed in the National Congress, provides for the establishment of a working day of 30 weekly hours and six daily hours for nursing professionals,<sup>48</sup> this being one of the main demands of nursing workers. It is known that, due to the excessive workload, the very nature of nursing work, as well as the physical, psychological and social stress, the fight for the reduction of the working day is put as legitimate for the workers of the category. However, we must consider that obtaining the 30 hours per week must not reverberate in the reduction of the professionals, in the burst of labour benefits,<sup>49</sup> nor the (greater) qualiquantitative scrapping of the contingent of workers. In clear words, a breakthrough cannot represent one or more setbacks, and, linking this to the COVID-19 pandemic, there is expected to be some legacy from it.

In the international year of nursing, also marked by the COVID-19 pandemic, the defragmentation of care is changing, proposing from the leadership of nurses to ethical and satisfactory transformation for the health of society.<sup>50</sup> The *Nursing Now* campaign, officially launched in Brazil in 2019, envisages fostering the leadership of nurses and their greater participation in the political agenda and decision-making positions.<sup>47</sup> This is expected to mean a movement of greater engagement of the profession concerning the power to set directions, including aspects of interest to the suitability of nursing professionals, both in the context of a pandemic and outside it, which is interpreted as fully in line with the "Goal 2" of the campaign, which deals with investment in better working conditions.<sup>51</sup> Thus, the need to reflect on the post-pandemic period emerges.

## Providing Nursing Professionals Post-COVID-19: Is There Optimism?

COVID-19 is an eminently contagious pathology, with no vaccines and no effective therapeutic assistance to date<sup>52</sup> (October 2020). The risk of health collapse exists, and it is essential to expose the experience of health and nursing professionals during the imposed confrontation. It is considered fundamental that society recognizes these collaborators as essential to the development of access and quality of services.<sup>53,54</sup> However, much more than this, nursing workers need social recognition for their bravery to be deployed in better working conditions, which includes, with evidence, the adequacy of personnel provision.

Nursing professionals are expected to be recognized financially, socially and professionally, and in the event of legalization of the PL of 30 hours per week and the national wage floor, there is no openness to setbacks. Also, it is expected that research and reflections on working conditions and the harmful consequences on the work process during the pandemic and the post-pandemic will be encouraged to list effective interventions for prophylaxis and follow-up of workers' illnesses.<sup>33,53</sup>

Government bodies should give priority to the safety and health of health professionals, and managers of health institutions and nursing services should promote a safe working environment for workers and patients. Besides, the entities of the category (trade unions, councils and nursing associations) need to guarantee labour prerogatives, better working conditions and psychosocial support for professionals, whether in the public or private sphere.<sup>53</sup>

The COVID-19 pandemic has highlighted nursing in Brazil and the world. Besides, it has proved the magnitude of the SUS, research centers, and universities (teaching, research, and extension), which contribute to a more empathetic society to the most vulnerable groups,<sup>54</sup> and are essential to the viability of technical actions in facing the pandemic.

As for predicting possible scenarios for the provision of nursing staff in the acclaimed post-pandemic period, it is not necessary to state conclusively what they will be and how much the pandemic will impact future decisions. However, it is worth considering that the articulation of governmental, fiscal, academic, nursing leadership, the workers themselves and the society as a whole, can be a means of really valuing the work of nursing and, thus, that the repercussions regarding the adequacy of professional staff are more feasible and optimistic. It is known that this permeates a sometimes distinct game of interests, and, for this, the process of an honest and clear definition of goals which suit a minimally common objective can be interesting.

# FINAL CONSIDERATIONS AND IMPLICATIONS FOR PRACTICE

The health situation expressed by COVID-19 in Brazil seems to show to society the high workload and the undersizing of nursing professionals. This scenario also demonstrates the ambivalence of strengths and weaknesses of the dimensions that involve the dimensioning of human resources as an instrument of people management in the category.

In the labour dimension, it is evident and reinforced the deleterious repercussions that the inadequacy of nursing staff brings to workers, patients and services, in multiple spheres. In an ethical view, it is pointed out that the initiatives of the fiscal and regulatory bodies of the profession on the definition of parameters which determine the dimensioning of nursing staff

in the pandemic and outside it are fruitful, even if this in itself does not guarantee the expected adequacy, even because it is evident that there is a political dimension which involves the dimensioning of human resources. From this point of view, it is considered that the (un)articulated macro and micropolitical interests of the profession, class entities, government, health/nursing services and leaderships, researchers/universities, and society itself as a whole tend to firm up positively or negatively in the scenario of forecasting and providing nursing staff, whether in confronting the pandemic (in an austere manner) or thereafter.

It is believed that the most expressive limitation of this study is the fact that critical reflections have been made from a perspective without, however, considering other possible ones, such as the very difficulties that managers and institutions may encounter in improving the supply of nursing professionals, especially in the troubled context of the COVID-19 pandemic. However, it is considered that the study has a robust theorizing effect which may serve as a subsidy for debates which may lead to better practices in the sizing and adequacy of nursing staff and, in this way, have an impact on the quality of care, especially in the Brazilian context which has been more widely and deeply explored.

### **FINANCIAL SUPPORT**

This work was carried out with the support of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) (Coordination of Higher Level Staff Improvement - Brazil).

### **AUTHOR'S CONTRIBUTIONS**

Design of the reflection study. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. Denilse Damasceno Trevilato. João Lucas Campos de Oliveira.

Theorical framework. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes.

Analytical reflection on theoretical framework. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. João Lucas Campos de Oliveira

Interpretation. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. Denilse Damasceno Trevilato. João Lucas Campos de Oliveira

Writing and critical review of the manuscript. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. Denilse Damasceno Trevilato. João Lucas Campos de Oliveira

Approval of the final version of the article. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. Denilse Damasceno Trevilato. João Lucas Campos de Oliveira.

Responsibility for all aspects of the content and the integrity of the published article. Juliana Aparecida Peixoto Nishiyama. Rúbia Marcela Rodrigues Moraes. Ana Maria Müller de Magalhães. Anair Lazzari Nicola. Denilse Damasceno Trevilato. João Lucas Campos de Oliveira

### ASSOCIATE EDITOR

Cristina Rosa Baixinho

### REFERENCES

- Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y et al. Early transmission dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia. N Engl J Med. 2020;382(13):1199-207. http://dx.doi.org/10.1056/ NEJMoa2001316. PMid:31995857.
- Iser BPM, Sliva I, Raymundo VT, Poleto MB, Schuelter-Trevisol F, Bobinski F. Suspected COVID-19 case definition: a narrative review of the most frequent signs and symptoms among confirmed cases. Epidemiol Serv Saude. 2020 jun 22;29(3):e2020233. http://dx.doi. org/10.5123/S1679-49742020000300018. PMid:32609142.
- World Health Organization, Organização Pan-americana da Saúde. Folha informativa-COVID-19 (doença causada pelo novo coronavírus) [Internet]. Genebra: WHO; 2020 [citado 2020 jun 30]. Disponível em: https://www. paho.org/bra/index.php?option=com\_content&view=article&id=6101:covid 19&Itemid=875
- Bassetti M, Vena A, Giacobbe DR. The Novel Chinese Coronavirus (2019-nCoV) Infections: challenges for fighting the storm. Eur J Clin Invest. 2020;50(3):e13209. http://dx.doi.org/10.1111/eci.13209. PMid:32003000.
- Ministério da Saúde (BR), Secretaria de Vigilância em Saúde. Novo coronavírus (2019-nCoV). Boletim Epidemiológico [Internet]; 2020 [citado 20 jun 2020]; 4(51):1-37. Disponível em: https://www.conasems. org.br/wp-content/uploads/2020/01/Boletim\_epidemiologico\_SVS\_04. pdf
- World Health Organization. Coronavirus Disease (COVID-19) Dashboard [Internet]. Genebra: WHO; 2020 [citado 2020 out 14]. Disponível em: https://covid19.who.int/
- Conselho Federal de Enfermagem. Observatório da Enfermagem [Internet]. Brasília: COFEN; 2020 [citado 2020 out 14]. Disponível em: http://observatoriodaenfermagem.cofen.gov.br/
- Conselho Federal de Enfermagem. Brasil é o país com mais mortes de enfermeiros por Covid-19 no mundo [Internet]. Brasília: COFEN; 2020 [citado 2020 ago 1]. Disponível em: http://www.cofen.gov.br/ brasil-e-o-pais-com-mais-mortes-de-enfermeiros-por-covid-19-nomundo-dizem-entidades\_80181.html
- Fiho JMJ, Assunção AÁ, Algranti E, Garcia EG, Saito CA, Maeno M. A saúde do trabalhador e o enfrentamento da COVID-19. Rev Bras Saúde Ocup. 2020;45:e14. http://dx.doi.org/10.1590/2317-6369ed0000120.
- 10. Organização Pan-Americana de Saúde. Dia Mundial da Saúde: OMS e parceiros pedem investimentos urgentes em profissionais de enfermagem [Internet]. OPAS Brasil; 2020 [citado 2020 ago 26]. Disponível em: https://www. paho.org/bra/index.php?option=com\_content&view=article&id=6134:diamundial-da-saude-oms-e-parceiros-pedem-investimentos-urgentesem-profissionais-de-enfermagem&Itemid=844
- World Health Organization. State of the world's nursing 2020 [Internet]. Genebra: WHO; 2020 [citado 2020 jun 20]. Disponível em: https://apps. who.int/iris/bitstream/handle/10665/331673/9789240003293-eng.pdf
- 12. Resolução COFEN nº 543, 18 de abril de 2017 (BR). Atualiza e estabelece parâmetros para o dimensionamento do quadro de profissionais de enfermagem nos serviços/locais em que são realizadas atividades de enfermagem. Diário Oficial da União [periódico na internet]. Brasília (DF), 2017 [citado 2020 jul 18]. Disponível em: http://www.cofen.gov. br/resolucao-cofen-5432017\_51440.html
- Vasconcelos RO, Rigo DFH, Marques LGS, Nicola AL, Tonini NS, Oliveira JLC. Dimensioning of hospital nursing personnel: study with brazilian official parameters of 2004 and 2017. Esc Anna Nery. 2017;21(4):e20170098. http://dx.doi.org/10.1590/2177-9465-ean-2017-0098.
- 14. Santos LC, Andrade J, Spiri WC. Dimensioning of nursing professionals: implications for the work process in the family health strategy. Esc Anna

Nery. 2019;23(3):e20180348. http://dx.doi.org/10.1590/2177-9465-ean-2018-0348.

- Maziero ECS, Teixeira FFR, Cruz EDA, Matsuda LM, Sarquis LMM. Dimensionamento de pessoal de enfermagem em unidades de terapia intensiva infantil: carga de trabalho versus legislação. Cogitare Enfermagem [Internet]. 2020; [citado 2020 jul 26];25:e64058. Disponível em: https://revistas.ufpr.br/cogitare/article/view/64058
- Barbosa DJ, Gomes MP, Souza FBA, Gomes AMT. Fatores de estresse nos profissionais de enfermagem no combate à pandemia da COVID-19: Síntese de Evidências. Com. Ciênc Saúde (Porto Alegre) [Internet]. 2020; [citado 2020 jul 26];31(Suppl 1):31-47. Disponível em: http://www.escs. edu.br/revistaccs/index.php/comunicacaoemcienciasdasaude/article/ view/651/291
- Helioterio MC, Lopes FQRS, Sousa CC, Souza FO, Pinho PS, Sousa FNF et al. Covid-19: por que a proteção de trabalhadores e trabalhadoras da saúde é prioritária no combate à pandemia? Trab Educ Saúde. 2020;18(3):e00289121.http://dx.doi.org/10.1590/1981-7746-sol00289.
- Silva MCN, Machado MH. Sistema de Saúde e Trabalho: desafios para a Enfermagem no Brasil. Ciênc. saúde coletiva. 2020;25(1):7-13. http:// dx.doi.org/10.1590/1413-81232020251.27572019.
- Fugulin FMT, Oliveira JLC, Nicola AL, Araujo ASS, Marinho AM, Canavezi CM et al. Dimensionamento de profissionais de enfermagem: implicações para a prática assistencia. Divulgação em Saúde para Debate [Internet]. 2016; [citado 2020 jul 30];56:126-33. Disponível em: https:// www.researchgate.net/publication/311753919\_Dimensionamento\_de\_ profissionais\_de\_enfermagem\_implicacoes\_para\_a\_pratica\_assistencia
- Aiken LH, Sloane D, Griffiths P, Rafferty AM, Bruyneel L, McHugh M et al. Nursing skill mix in European hospitals: cross-sectional study of the association with mortality, patient ratings, and quality of care. BMJ Qual Saf. 2017;26(7):559-68. http://dx.doi.org/10.1136/bmjqs-2016-005567. PMid:28626086.
- 21. Conselho Federal de Enfermagem. Saúde de Profissionais de Enfermagem é foco em tempos de Covid-19 [Internet]. Brasília: COFEN; 2020. [citado 2020 jun 20]. Disponível em: http://www.cofen.gov.br/saude-deprofissionais-de-enfermagem-e-foco-em-tempos-de-covid-19\_78321. html
- 22. The Lancet. COVID-19: protecting health-care workers. Lancet. 2020;395(10228):922. http://dx.doi.org/10.1016/S0140-6736(20)30644-9.
- 23. Magalhães AMM, Costa DG, Riboldi CO, Mergen T, Barbosa AS, Moura GMSS. Association between workload of the nursing staff and patient safety outcomes. Rev Esc Enferm USP. 2017;51(0):e03255. http:// dx.doi.org/10.1590/s1980-220x2016021203255. PMid:29211232.
- Biff D, Pires DEP, Forte ECN, Trindade LL, Machado RR, Amadigi FR et al. Cargas de trabalho de enfermeiros: luzes e sombras na Estratégia Saúde da Família. Ciênc. saúde coletiva. 2020;25(1):147-58. https:// doi.org/10.1590/1413-81232020251.28622019.
- Ramalho AO, Freitas PSS, Nogueira PC. Medical Device-Related Pressure Injury in health care professionals in times of pandemic. ESTIMA. Braz. J. Enterostomal Ther. 2020;18:e0120. http://dx.doi. org/10.30886/estima.v18.867\_IN.
- 26. Santos RR, Lima EFA, Freitas PSS, Galavote HS, Rocha EMS, Lima RCD. The role of teamwork in Primary Health Care. Rev. Bras. Pesq. Saúde [Internet]. 2016; [citado 2020 jul 10];18(1):130-39. Disponível em: https:// pdfs.semanticscholar.org/8171/df67d2254cd879c258afd7b0254ae96a9311. pdf
- Pires DEP, Machado RR, Soratto J, Scherer MA, Gonçalves ASR, Trindade LL. Nursing workloads in family health: implications for universal access. Rev. Latino-Am. Enfermagem. 2016;24(0):e2677. http://dx.doi. org/10.1590/1518-8345.0992.2682.
- Melo CMM, Carvalho CA, Silva LA, Leal JAL, Santos TA, Santos HS. Nurse workforce in state services with direct management: revealing precarization. Esc Anna Nery. 2016;20(3):e20160067. http://dx.doi. org/10.5935/1414-8145.20160067.
- Oliveira AC. Challenges faced by nursing professionals in the COVID19 pandemic [editorial]. REME - Rev Min Enferm. 2020;24:e-1302. http:// dx.doi.org/10.5935/1415-2762.20200032.
- Falcão DA, Macedo AMA, Sousa VM, Fernandes KJSS, Pereira FGF. Nursing team stress at the ready-service of a public hospital. Rev. Enferm. UFPI. 2019;8(2):38-44.

- Mosteiro-Díaz MP, Baldonedo-Mosteiro M, Borges E, Baptista P, Queirós C, Sánchez-Zaballos M et al. Presenteeism in nurses: comparative study of Spanish, Portuguese and Brazilian nurses. Int Nurs Rev. 2020;00:1-10. PMid:32844446.
- 32. Organização Pan-Americana de Saúde. Surto da doença coronavírus (COVID-19): direitos, papéis e responsabilidades dos trabalhadores da saúde, incluindo as principais considerações sobre segurança e saúde ocupacional. Orientação provisória: 19 de março de 2020. OPAS/BRA/Covid-19/20-033 [Internet]. 2020 [citado 2020 jul 26]. Disponível em: https://iris.paho.org/bitstream/handle/10665.2/51988/ OPASBRACOVID1920033\_por.pdf?sequence=1&isAllowed=y
- Quadros A, Fernandes MTC, Araujo BR, Caregnato RCA. Desafios da enfermagem brasileira no combate da COVID-19: uma reflexão. Enferm. Foco [Internet]. 2020; [citado 2020 ago 14];11(1 Esp):78-83. Disponível em: http://revista.cofen.gov.br/index.php/enfermagem/article/ view/3748/807
- Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA Netw Open. 2020 mar;3(3):e203976. http://dx.doi.org/10.1001/jamanetworkopen.2020.3976. PMid:32202646.
- Inter-Agency Standing Committee. Guia preliminar: como lidar com os aspectos psicossociais e de saúde mental referente ao surto de COVID-19 – Versão 1.5 [Internet]. 2020 [citado 2020 jun 20]. Disponível em https://interagencystandingcommittee.org/system/files/2020-03/ IASC%20Interim%20Briefing%20Note%20on%20COVID-19%20 Outbreak%20Readiness%20and%20Response%20Operations%20 -%20MHPSS%20%28Portuguese%29.pdf
- 36. Parecer Normativo nº 002/2020 atualização 01, de 28 de maio de 2020 (BR). Estabelece, na forma deste Parecer Normativo, parâmetros mínimos de profissionais de Enfermagem para atendimento aos pacientes acometidos pela COVID-19, internados em Hospitais Gerais, Hospitais de Campanha, Unidades de Tratamento Semi-Intensivo/ Salas de Estabilização e Unidades de Terapia Intensiva-UTI. Diário Oficial da União [periódico na internet]. Brasília (DF), 2020 [citado 2020 jun 20]. Disponível em: http://www.cofen.gov.br/parecer-normativo-no-002-2020\_79941.html
- Duncan DL. What the COVID-19 pandemic tells us about the need to develop resilience in the nursing workforce. Nurs Manag (Harrow). 2020;27(3):22-7.http://dx.doi.org/10.7748/nm.2020.e1933.PMid:32400142.
- Ministério da Saúde (BR), Secretaria de Vigilância em Saúde. Doença pelo Coronavírus 2019 (COVID-19). Boletim Epidemiológico [Internet]; 2020 [citado 17 ago 2020]; 11:1-37. Disponível em: https://portalarquivos. saude.gov.br/images/pdf/2020/April/18/2020-04-17---BE11---Boletimdo-COE-21h.pdf
- Maltezou HC, Dedoukou X, Tseroni M, Tsonou P, Raftopoulos V, Papadima K et al. SARS-CoV-2 infection in healthcare personnel with high-risk occupational exposure: evaluation of seven-day exclusion from work policy. Clin. infect dis. 2020;ciaa888. https://doi.org/10.1093/cid/ciaa888.
- Lucchini A, Giani M, Elli S, Villa S, Rona R, Foti G. Nursing Activities Score is increased in COVID-19 patients. Intensive Crit Care Nurs. 2020;59:102876. http://dx.doi.org/10.1016/j.iccn.2020.102876. PMid:32360493.
- Trettene AS, Razera APR, Beluci ML, Prado PC, Mondini CCSD, Spiri WC. Absenteeism and the Technical Safety Index of a tertiary hospital nursing team. Rev Esc Enferm USP. 2020;54:e03585. http://dx.doi. org/10.1590/s1980-220x2018036003585. PMid:32813797.
- Feldhaus C, Souza RF, Fernandes LM, Carvalho ARS, Bordin V, Oliveira JLC. Association between workload and absenteeism in nursing technicians. Texto Contexto Enferm. 2019;28:e20180307. http://dx.doi. org/10.1590/1980-265x-tce-2018-0307.
- 43. Conselho Federal de Enfermagem. Fiscalização aponta subdimensionamento na resposta à COVID-19 [Internet]. Brasília: COFEN; 2020 [citado 2020 ago 17]. Disponível em: http://www.cofen.gov.br/fiscalizacao-apontasubdimensionamento-na-resposta-a-covid-19\_81197.html
- 44. Emenda Constitucional nº 95, de 15 de dezembro de 2016 (BR). Altera o Ato das Disposições Constitucionais Transitórias, para instituir o Novo Regime Fiscal, e dá outras providências. Diário Oficial da União [periódico na internet], Brasília (DF), 2016 [citado 17 ago 2020]. Disponível em:

 $http://www.planalto.gov.br/ccivil_03/constituicao/emendas/emc/emc95. \ htm$ 

- Rafael RMR, Neto M, Carvalho MMB, David HMSL, Acioli S, Faria MGA. Epidemiologia, políticas públicas e pandemia de Covid-19: o que esperar no Brasil?. Rev enferm UERJ. 2020;28:e49570. http://dx.doi. org/10.12957/reuerj.2020.49570.
- 46. Medida provisória nº 927, de 22 de março de 2020 (BR). Dispõe sobre as medidas trabalhistas para enfrentamento do estado de calamidade pública reconhecido pelo Decreto Legislativo nº 6, de 20 de março de 2020, e da emergência de saúde pública de importância internacional decorrente do coronavírus (covid-19), e dá outras providências. Diário Oficial da União [periódico na internet], Brasília (DF), 2020 [citado 30 jun 2020]. Disponível em: http://www.planalto.gov.br/ccivil\_03/\_ato2019-2022/2020/Mpv/mpv927.htm
- Silva LC, Oliveira DAL, Santos ABR, Barbosa LMS, Araújo LG, Barboza MTV et al. Dimensionamento de pessoal e sua interferência na qualidade do cuidado. Rev enferm UFPE on line. 2019;13(1):491-8. https://doi. org/10.5205/1981-8963-v13i02a236551p491-498-2019.
- Projeto de Lei Nº 2295/2000 (BR). Dispõe sobre a jornada de trabalho dos Enfermeiros, Técnicos e Auxiliares de Enfermagem. Diário Oficial da União [periódico na internet], Brasília (DF), 2000 [citado 28 jul 2020]. Disponível em: https://www.camara.leg.br/proposicoesWeb/ fichadetramitacao?idProposicao=17915
- Bardaquim VA, Dias EG, Dalri RCMB, Robazzi MCC. Reflexão sobre as condições de trabalho da enfermagem: subsídio às 30 horas

de trabalho. Rev Enferm Contemp. 2019;8(2):171-81. http://dx.doi. org/10.17267/2317-3378rec.v8i2.2466.

- Baixinho CL, Ferreira Ó. Defragment or integrate care? A challenge for the international year of the nurse. Rev baiana enferm. 2020:34:e.35856. http://dx.doi.org/10.18471/rbe.v34.35856.
- Cassiani SHB, Lira No JCG. Nursing perspectives and the "Nursing Now" campaign. Rev Bras Enferm. 2018;71(5):2351-2. http://dx.doi. org/10.1590/0034-7167.2018710501. PMid:30304161.
- Basile C, Combe C, Pizzarelli F, Covic A, Davenport A, Kanbay M et al. Recommendations for the prevention, mitigation and containment of the emerging SARS-CoV-2 (COVID-19) pandemic in haemodialysis centres. Nephrol Dial Transplant. 2020;35(5):737-41. http://dx.doi. org/10.1093/ndt/gfaa069. PMid:32196116.
- Machado MH, Pereira EJ, Ximenes No FRG, Wermelinger MCMW. Enfermagem em tempos da COVID-19 no Brasil: um olhar da gestão do trabalho. Enferm. Foco [Internet]; 2020; [citado 2020 ago 16];11(1 Esp):32-9. Disponível em: http://revista.cofen.gov.br/index.php/ enfermagem/article/view/3994/800
- Geremia DS, Vendruscolo C, Celuppi IC, Souza JB, Schopf K, Maestri E. Pandemia covid-2019: formação e atuação da enfermagem para o Sistema Único de Saúde. Enferm. Foco [Internet]; 2020 [citado 2020 ago 16];11(1 Esp):40-7. Disponível em: http://revista.cofen.gov.br/index. php/enfermagem/article/view/3956