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Mapping nursing training in Brazil: challenges for actions in complex and globalized scenarios

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Abstract *The article discusses the professional formation of nurses, implications of the increase in the number of Higher Education Institutions and their distribution in Brazil. It considers the results of the Nursing Profile Survey in Brazil, carried out with 35,916 nursing professionals, in 2013. The analysis that characterizes the trajectory of undergraduate nursing in this article is structured in three dimensions: the increase in the number of undergraduate and postgraduate nursing education institutions; the boom in nursing schools and the public vs. private relationship; and the territorial distribution of the registered nurse in Brazil. The increase in the number of Nursing Education Institutions implies an exponential formation, with a predominance of private schools in undergraduate and postgraduate courses. The courses seek to align themselves with changes in health and society, but it is crucial to equalize the territorial asymmetries between the undergraduate and graduate training institutions, the overconcentration and care gaps resulting from the insufficiency of nurses per inhabitant, as well as to qualify the nurses for the exercise of their professional activities in the face of global changes.*

Key words *Nurse, Education Nursing Diploma Programs, Education Nursing Graduate, Professional Training, Professional Practice*

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Introduction

Vocational training is updated as it fits into the educational, labor, political, economic and social scenarios that follow global transformations[1]. These scenarios coexist with demographic transitions, technological, educational, and cultural revolutions, as well as their epistemological structures, which support or lead institutions to transformation, adaptation and innovation in a connected world[2].

This understanding is recursive regarding the challenges that underlie the academic formation to situate it within these transforming contexts[3]. A plural education predicts impacts on health indicators, improving the quality of life of populations, ensuring the social nature of nurses' professional practice[4]. In this context, the article deals with the professional education of nurses, at the undergraduate and postgraduate level and its implications, considering the results of the Nursing Profile Survey in Brazil (*Pesquisa Perfil da Enfermagem no Brasil*, PPEB)[5,6].

Therefore, the analysis of the results that characterize the trajectory of the nursing education is structured in three distinct but interconnected dimensions: (i) *the expansion of nursing education in undergraduate and postgraduate studies*; (ii) *the increase in the number of nursing schools and the public x private* relationship; and (iii) *the territorial distribution of the professional nurse in Brazil*, considering the two previous ones.

Studies that follow this analytical line are justified, as the professional education of nurses must develop a globalized view and enter the competitive world, which has increasingly produced and disseminated knowledge. On the other hand, it is crucial that this reality be modified and that new proposals appear, transforming the nursing formation profile. However, geopolitical niches seem to coexistent, to which the professional nurses easily adapt, even with the current formation profile, with others, in which they have their competences, skills and attitudes challenged, when facing different market demands.

As part of this discussion and defending the existence of formation scenarios aligned with the transformations of the 21st century[1-3], the article analyzes associations that permeate the accelerated growth of nursing education and the occurrence of the privatization of Nursing education, as well as the heterogeneous intensity and territorial distribution of these aspects in Brazil, leading to the coexistence of care scenarios along the lines recommended by international organizations, with others showing absolute neediness.

Accelerated growth of undergraduate and postgraduate nursing education

In Brazil, the formation of professional nurses seeks to align with the National Curriculum Guidelines (*Diretrizes Curriculares Nacionais*, DCNs), aiming to overcome the Flexnerian paradigm that shaped the curricular matrices of health courses[7]. It has been recognized that the Pedagogical Projects of Nursing Courses (PPC) seek to overcome curricular matrices focused on topics that prioritize the biological aspects and medicalization practices. Therefore, the projects intend to offer to society the formation of a professional that has competences, skills and ethical attitudes that respond to the demands required by health services and intersectoriality[8].

Therefore, the DCNs[9] guide the preparation of curricula for undergraduate courses that are followed by Higher Education Institutions (HEIs), guaranteeing, among other purposes, academic flexibility to ensure a solid basic education, able to prepare the professional to deal with the challenges and rapid global transformations.

On the other hand, the debates and disputes about the materiality of DCNs in health curricula and its consequences for the professional's formation are recurrent in the literature[10]. There are still no concrete theoretical and practical articulations, professional attitudes with a social practice outline that meets the health needs of the population, as well as the expected professional profile to meet the care demands of the Brazilian Unified Health System (SUS, *Sistema Único de Saúde*)[7-8,11].

Nevertheless, it has been recognized in recent decades that advances in Nursing formation are the result of paradigmatic alterations, as an attempt to overcome simplified and fragmented thinking of reality, aiming to construct an integrated, complex, polysemic, multifaceted and innovative view. In line with the education and health policies, one can identify in the curricula incentives for the students to become the central subject of their formation, capable of moving along the flexibility of curriculum matrices and acting in the presence of changes and incorporations of knowledge[11,12].

There is a consensus among scholars in the area about the recurrence of debates based on the formation of a generalist professional, aware of the socio-sanitary singularities, the importance of technological advances, of political and economic uncertainties, in addition to other challenges, which require HEIs to rethink their models of vocational training in the 21st century[1-4,6].

In line with these transformations, the University of Chile develops a different model for the professional formation of nursing students, based on the growing migration rates between South American countries. This model aggregated curricular innovations that answered these cultural adaptations, such as racial issues, respect for diversity and the introduction of non-discriminatory and non-xenophobic practices. The experience has been satisfactory, albeit constantly updated to attain the expected goal. When analyzing this experience, one considers that it is essential that nursing professionals contribute to the advancement of equitable, all-inclusive and culturally coherent health care for the construction of a professional identity[12].

In addition to positioning oneself and understanding cross-cultural diversity, it is crucial that students develop critical thinking during their vocational training, with the ability to pursue research and continuing education activities as a mechanism for improving this critical view[13].

Accordingly, Linda Fergunson[14], a specialist in nursing education and training (Association of Canadian Nurses), highlights that the evolution of nursing research reflects the lack of a qualified clinical experience. She adds that continuing the idea that students keep doing the same things over and over again can certify the credits for obtaining the degree. However, considering a comprehensive and qualified training requires more than just repetitive clinical experience.

The academic formation of nursing courses should be based on this medley of knowledge, going beyond the "technical-scientific participation" and thus, above all, taking into account the social, political, economic, ethical and legal topics capable of boosting a responsible action towards the society. Several authors have pointed out that education must rescue and re-signify a formation focused on citizenship, with responsible leadership and recognized by an ethical practice that emphasizes the moral values of the profession as an imperative need[15].

When articulating the rescue of the ethical and collaborative coexistence, the Landmark for Action in Interprofessional Education and Collaborative Practice (*Marco para Ação em Educação Interprofissional e Prática Colaborativa*)[16], alerts and calls upon the institutions that train health professionals about the need for cooperative and articulated networking, exchange of knowledge between professions with interdisciplinary learning.

In Brazil, the Federal Constitution[17], anchored in the epistemic and organizational principles of SUS, defines health as a social asset, the citizens' right and the government's responsibility. Driven by the reorientation of the health care model and the demand for care considering the complexity levels, and under the influence of the Education Guidelines and Foundation Law (*Lei de Diretrizes e Bases da Educação*, LDB), higher education has expanded, with the predominance of the private sector, initially, aiming to supply the care gaps resulting from the scarcity of human resources in the health area.

With the creation and implementation of the Family Health Program (FHP), later called Family Health Strategy (FHS), the professional nurses, who make up the minimum team, establish themselves as the protagonists in expanding coverage and ensuring the population's access to Primary Health Care (PHC), required by the increased decentralization of actions and services and the strengthening of health management in Brazilian municipalities.

After the year 2000, with the advancement in the institution and implementation of inclusive social and health policies, there was a concomitant proliferation of university courses in health. However, consideration is given to maintaining high-quality and plural education, associated with employability in urban and rural spaces, from a multi-country perspective, even though each geographical area has its local problems, cultural diversity and local epidemiological profile, but related to global challenges.

The boom of Nursing Schools and the public-private relation

The number of nursing schools in Brazil and the consequent increase in the number of professionals that graduate each year and are ready to enter the job market, which has multiple health needs and social demands, requires the reorientation of directions in this educational field[6].

At the end of the 1990s, having access to higher education in Brazil was associated with the individual's structural position. With the increase in the number of private HEIs, this association is no longer linear, and an exponential ascent begins[18]. In addition to increasing the number of private HEIs, it is worth pointing out the creation of scholarship programs for higher education (both public and private), thus helping a portion of the population – including individuals from the poorest strata of society – to have access to this level of education[19].

Obtaining a degree has become a requirement for employment. Private colleges, run by

the education business, expanded the offer of seats to disadvantaged sections of the population. The expansion of higher education has been supported by the phenomenon of certification, as the labor market has increased the demand for diplomas for jobs previously occupied by high school-level professionals[20]. This process induces workers in the labor market to seek higher education, when they perceive the offer of professionals with higher educational degrees as a threat, albeit willing to fill the same positions and perform the same functions[21].

The expansion of education verified between the period of 2002 and 2012 is an expression of multiple determinations, such as changes in the work market, which require the professionals' readaptation to this market. The figures provided by *Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira* (INEP), which monitors and follows higher education performance, as a whole, has unquestionable relevance, by showing that whereas in 2000 there were 352,305 graduates of higher education in the Brazil, in 2012 this figure reached 1,050,413, demonstrating a 198% increase[22,23].

The health sector has the differential of not entirely replacing the human element by technology, although it is a sector of intense and accelerated technological incorporation, thus increasingly requiring accredited workers to act in this constantly changing market. In the health sector, light technologies and the subjectivity of human work prevail. It is in this sector that the expansion of HEIs found exacerbated space, reflection and motivation. In the same period analyzed, courses in the health area showed a 218% increase in the number of graduates, ranging from 69,323 in 2000 to 215,074 in 2012[24].

The Nursing profession with a hegemonic quantitative in health reflects this reality. With the creation of 684 new courses (2000-2012) it went from 183 to 867, which represented in 2012, 22% of graduates in the health area. In this period, there was an increase of 450% in the seats offered by the institutions and 750% increase in the number of graduates.

By the end of the 1960s, there were 34 Schools of Nursing in Brazil. In 1988, with the proposal to universalize the right to health, there were 103 Nursing courses in the country[25]. This number persisted with a linear and modest growth until 1995, when the country had 108 courses[26]. However, as shown in Chart 1, it continued to increase rapidly, especially in the private sector[27].

The issue of privatization of Nursing courses is a recent and progressive one, which has apparently been rapidly expanding. If, among those nurses trained in the 1990s, 35.1% graduated from private HEIs, among those who completed the course in the 2000s, this percentage reached 63.6% and reached 75.7% among those who graduated from 2010 to 2013. Thus, the majority of nurses who graduated until the end of the twentieth century studied at public institutions, corresponding to 59.1% of the total graduates between 1990 and 1999. Between 2010 and 2013, only 19.0% of nurses obtained their degree from a public institution (Chart 1).

In contrast, there is a shortage of nurses at the global level. A cohort study conducted in Thailand with registered nurses showed that the lack of nurses was a matter of concern. It identified a high rate of nurses that intended to leave the profession and a low number of students willing to become nurses[28].

Added to the difficulties related to the implications of the high number of HEIs, questions arose about the use of technical courses in the health area as a (1) "starting point" for contents and training, aiming at the selection for the higher education level, without any commitment to working in the health area; (2) an educational itinerary within a health area career; or (3) a condition for the employability that funds private higher education institutions. The most important exponents regarding the performance of these courses comprehend the nursing staff and the private initiative.

The large number of nursing technicians and/or aides who are graduating can lead to strains in some situations. These conflicts may exist during academic training, professional practice, and during the contact with the health care and nursing staff.

Data from PPEB[5] showed that over 31% of the nursing staff in Brazil have a diploma of Nursing Technician or Aide, having taken the course before graduation; and, more than ¼ of the nurses performs or performed the work of a medium or lower-level employee. Other information disclosed by the research data is that this aspect of nursing education is more common among men, as 41.1% have a diploma and 37.6% have worked as a nursing aide or technician (Table 1).

Possibly, becoming a nursing technician before graduating from Nursing School becoming a Registered Nurse may imply the necessity to enter the job market in the health sector, considered an important employer. On the other hand, during the work dynamics the nurse technicians or aides identify the urgent demands to expand their formation and become a competitive pro-

fessional in the work scenario. Moreover, there is the desire to ascend socially by acquiring a higher education diploma.

By understanding this situation, a study that discusses the socialization process and the transformation of nurse technicians into registered nurses[29] observed that this socialization enhances the understanding of the motivations arising from the desire for professional advancement in the nursing profession, which involve objective causes, such as the desire for better payment, and subjective motivations such as the aspiration for social recognition.

Even considering the exponential increase of nursing schools among Brazilian HEIs, this increase was neither enough – nor planned – to minimize the regional asymmetries regarding the proportion of nurses by number of inhabitants. What persists is the concentration of professionals in urban centers to the detriment of rural areas, and in the most developed and populated regions, when analyzing those characterized by secular social inequalities. This profile follows the uneven distribution of HEIs that offer undergraduate and postgraduate nursing courses in the country.

Territorial distribution of the professional nurse

This scenario becomes critical in the Americas, sub-Saharan Africa and Southeast Asia – continents living with extreme poverty, wars, violence, political conflicts, migratory flows, environmental disasters and turmoil that require health interventions and lack culturally competent professionals with technical and scientific expertise[30,31].

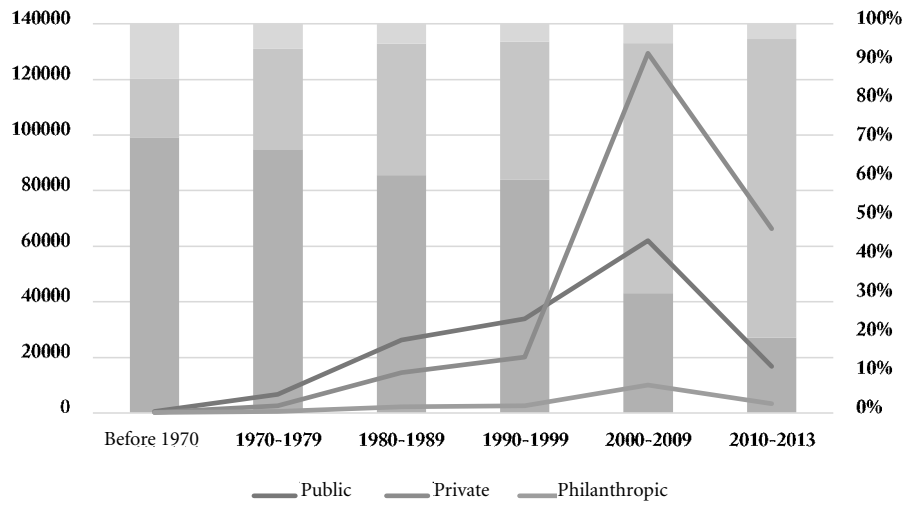

Chart 1. Nurses per formation period and type of HEIs.

Source: Nursing Profile Survey in Brazil, Fiocruz, 2013.

Table 1. Nurses who attended the course and worked as Nursing Aides or Technicians. PPEB, 2013.

Gender	Attended a course to become a Nursing Aide or Technician		Worked as a Nursing Aide or Technician		Total Nurses	
	N	%	n	%	N	%
Female	106,868	29.9	90,806	25.4	357,552	100.0
Male	22,789	41.1	20,854	37.6	55,401	100.0
Total	129,657	31.4	111,660	27.0	412,953	100.0

Source: Nursing Profile Survey in Brazil, Fiocruz, 2013.

The World Health Organization (WHO) Global Strategy on Human Resources for Health: Workforce – 2030 defines the political agenda for securing a workforce that is adequate for the aim of achieving the Sustainable Development Goals. This background document analyzes the quantitative implications and the requirements for its implementation, recommending the ideal rate of 4.45 professionals among doctors, nurses and midwives per 1,000 inhabitants[32].

This document, called "Health workforce requirements for universal health coverage and sustainable development goals", estimates that to reach the recommended rate, in the Americas alone, in 2013, the deficit of physicians was approximately 47,500 professionals (2.3%) and that of nurses and/or midwives, over 516,000 professionals (11.0%).

However, the Organization for Economic Cooperation and Development (OECD), in the document Health at a Glance 2017: OECD Indicators[1], points to the need for 9.0 nurses per one thousand inhabitants to allow access and qualified care to the populations.

Studies have demonstrated the existence of care gaps that confront the formation of this professional. While there is a displaced number of professionals from the labor market, gaps are identified by the small number of qualified professionals. This contradiction has been a challenge to health systems and services in the international and national scenarios. It can be understood that the phenomenon is a multidimensional one and considers several aspects, such as opportunities for better working conditions, professional development, personal and family quality of life[33].

In Brazil, this scenario is identified regarding the concentration and asymmetry in the distribution of nursing professionals among the Brazilian states and even within them. In Table 2, the distribution of these professionals does not follow, proportionally, the territorial area of each state, not even the relative distribution of the population among them.

Another aspect observed (Table 2) is the overconcentration of nurses in the state capitals. In this sense, it is worth noting that the largest concentration of nurses in a capital city was observed in Aracajú, which has more than 90% of nurses from the state of Sergipe. It is observed that, with the exception of the Federal District, the rate of nurses per thousand inhabitants is at least 29% higher in the capitals than in that state – as in Rio de Janeiro – and it can be 352% higher – as observed, based on the nurses' rates/1,000 inhabitants, in Florianópolis and Santa Catarina.

The Federal District (4.07) and the States of Rio de Janeiro (2.75), Tocantins (2.59) and Paraíba (2.36), as well as the cities of Belo Horizonte (9.26), João Pessoa (8,22), Porto Alegre (7,97) and Vitória (7,86) – respectively, the capital cities of the states of Minas Gerais, Paraíba, Rio Grande do Sul and Espírito Santo – have the highest rates of nurses/1,000 inhabitants. On the other hand, the Brazilian states and capitals with the lowest rates of these professionals/1,000 inhabitants are Pará (1.11), Roraima (1.20), Alagoas (1.24), Sergipe (1.47), in addition to the cities of Boa Vista (RR/1.67), Brasilia (DF/2.03), Porto Velho (RO/2.25) and Macapá (AP/2.70)[34].

Another aspect disclosed by the PPEB is that intra-state inequalities may be greater than interstate or interregional ones. Thus, the state of Minas Gerais, for instance, with a rate of 2.06 nurses per 1,000 inhabitants, is far from reaching the minimum ideal rate recommended by the WHO for health professionals – doctors, nurses and midwives (considering that the number of nurses and obstetric nurses, in the Brazilian reality, is always higher than the number of physicians) – which is 4.45 per 1,000 inhabitants by 2030. The capital of Minas Gerais, the city of Belo Horizonte, has a very different reality, with 9.26 nurses/1,000 inhabitants, a figure that makes the city surpass even the rate recommended by the OECD[1] for the category of nurses, which corresponds to 9.0 nurses/1,000 inhabitants.

Contrary to what one might envisage, two states in the southern region show an equally marked Capital x Countryside inequality. Rio Grande do Sul has a rate of 1.85 nurses/1,000 inhabitants, while its capital city Porto Alegre has 7.97 nurses/1,000 inhabitants; a similar situation occurs in the state of Santa Catarina, with 1.74 nurses/1,000 inhabitants, while the rate in its capital city Florianópolis is 7.84 nurses/1,000 inhabitants.

Regarding the role of nurses in the countryside and in distant communities, it is important to consider that the populations living in rural territories have beliefs that differ from those found in urban areas regarding the meaning attributed to the diseases, the way they are perceived, and the adopted therapies. In this scenario it is essential to understand that many of these situations cannot be addressed by linear and protocol practices developed for the epidemiological profiles of urban areas. The populations from rural areas require different attributes, highlighting

Table 2. Distribution characteristics and nurses'formation in the Brazilian territory.

States	Population in 2013 (n)	Population in the Capital (%)	Nurses (n)	Nurses in the capital (%)	Postgraduate courses attended by nurses	Nurses who graduated from private HEIs (%)
North						
Acre	776,463	46.0	1,709	79.9	1,541	20
Amazonas	3,807,921	52.1	8,502	83.2	7,727	53.3
Amapá	734,996	59.5	1,350	87.6	1,022	24.9
Pará	7,969,654	17.9	8,828	69.8	9,176	25.4
Rondônia	1,728,214	28.1	2,850	38.3	2,355	69.4
Roraima	488,072	63.3	584	88.2	567	46.7
Tocantins	1,478,164	17.5	3,822	41.7	3,015	69.9
Northeast						
Alagoas	3,300,935	30.2	4,078	72.0	4,143	41.4
Bahia	15,044,137	19.2	27,489	65.7	28,303	52.2
Ceará	8,778,576	29.1	14,308	73.8	14,728	47
Maranhão	6,794,301	15.5	10,685	62.1	10,446	55.4
Paraiba	3,914,421	19.7	9,232	68.5	8,786	55.4
Pernambuco	9,208,550	17.4	16,624	65.3	17,508	42
Piauí	3,184,166	26.3	6,847	66.9	6,794	36.2
Rio Grande do Norte	3,373,959	25.3	6,490	61.7	6,527	29.5
Sergipe	2,195,662	28.0	3,228	90.2	2,451	38.4
Southeast						
Espírito Santo	3,839,366	9.1	9,607	28.5	7,980	68
Minas Gerais	20,593,356	12	42,498	54.0	35,636	65.5
Rio de Janeiro	16,369,179	39.3	44,977	50.5	52,898	54.5
São Paulo	43,663,669	27.1	105,438	60.2	106,352	68
South						
Paraná	10,997,465	16.8	19.224	39.5	19,770	55.3
Rio Grande do Sul	11,164,043	13.2	20.629	56.7	22,271	52.1
Santa Catarina	6,634,254	6.8	11.523	30.9	12,889	56.5
Midwest						
Goiás	6.434.048	21,7	11.801	60,5	10.421	70
Mato Grosso do Sul	2.587.269	32,2	4.627	50,9	4.088	55
Mato Grosso	3.182.113	17,9	6.408	62,6	6.119	53,2
Distrito Federal	2.789.761	100	11.354	49,9	9.507	57

Sources: IBGE and Nursing Profile Survey in Brazil. (created by the authors).

the cultural competence to implement qualified care[35]. This challenge has driven the organization of nursing practice in countries such as Canada, the United States of America and Australia to make changes in legislation and vocational training, expanding the scope of nursing practice[36].

The tendency of HEI concentration in the Southeast region is associated with the fact that this region has the highest gross domestic product in the country, a large part of the Brazilian population, having experienced an intense industrialization process before the other regions, in addition to having an important technology arsenal and the largest labor market for all professions, particularly those at the university level.

Brazil does not have a specific nursing undergraduate program that addresses the reality of rural areas. The curriculum bases are generalist and do not broadly consider geographical specificities. Even the offer of professional practice

to the rural communities occurs only when the training units consider it necessary or when there is interest from the student[37].

Table 2 shows the percentage of nurses trained in private HEIs across the country, as well as an average rate of postgraduate courses performed (Vocational Training in Residency/ Residency Program, Specialization, Professional Master's Degree, Academic Master's Degree, Doctorate and Post-Doctorate Degrees) by the total number of nurses in the State.

Some peculiarities can be observed in the North region: four of the states (Roraima, Amapá, Acre and Rondônia) have the lowest absolute number of nurses; they are among the five least populated states (Roraima, Amapá, Acre, Tocantins and Rondônia); Amapá and Roraima show a higher population concentration and number of nurses in the capitals. On the other hand, Acre, Amapá and Pará show a predominance in nursing education in public HEIs; and Amapá and Tocantins show the least opportunities to obtain a postgraduate degree.

In the Northeast region, the following situations are observed: the states of Alagoas, Sergipe, Maranhão and Ceará have lower numbers of nurses; one of them has the least number of inhabitants (Maranhão); three have a higher concentration of nurses in the capital cities (Maranhão, Sergipe and Ceará); students from private nursing schools predominated, especially in Maranhão (55.40%), which, at the same time, showed the second lowest offer in postgraduate courses.

The South and Southeast regions showed similar scenarios regarding the number of nurses and private HEIs in the offer of courses. Similarly, the superiority of private HEIs is maintained; however, the offer of postgraduate courses remain restricted when considering the number of courses offered in relation to the number of registered nurses.

Regarding the Midwest region, with the exception of the Federal District, the other states are equal regarding the number of nurses per inhabitants and reiterate the concentration of this category in the capital cities. Despite the HEIs, the predominance of private institutions is confirmed and the state of Goiás stands out, with 70.0% of schools being private ones. On the other hand, there is a shortage of postgraduate courses.

Overall, the data from professionals who attended a HEI and became registered nurses, according to the PPEB, show that public policies have not been effective in deconcentrating the formation apparatus of nursing professionals in the Southeast region. This concentration goes beyond the higher education, specialization and/or technical levels. The formation of this workforce, indispensable to the Unified Health System, has not been funded by the public sector[38].

A large number of professionals that belong to the nursing staff – aides, technicians, registered nurses and specialists, were not, during their training, contemplated by the public sector. Considering postgraduate training as a whole, most professionals are eminently originated from private HEIs (52.6%). At the *lato sensu* level, this phenomenon is more intense, with 66.8% of specialist nurses in the private sector. Only in the case of residency, nursing and/or multiprofessional, the public sector stands out, accounting for the formation of 76.1% of nurses[39].

The private sector investments do not persist at the *stricto sensu* postgraduate level, where the demand is lower (19.6%) among nurses who have completed a Professional, Academic Master's degree, Doctorate or Postdoctoral degree. It can be stated that in the traditional postgraduate modalities, the public training policies are important structurers regarding the offer of Academic Master's Degree (87.1%) Doctoral (93.2%) and Post-Doctoral degrees (81.8%).

Another challenge to nursing education is the asymmetry regarding the location of these HEIs, which compromise the establishment and performance of these professionals at the places where they obtained their diplomas. Thus, intra- and inter-country migratory flows are established, and Brazil is no exception to this rule.

We emphasize that it is of the utmost importance for the formation of nurses the appropriation of macropolitical, economic and social issues to deal with health demands of the Brazilian borders, involving 569 municipalities in 15,719 km, with the countries of the Southern Common Market (MERCOSUR), when facing adverse health conditions[35], such as immune-preventable diseases.

Due to the relevance of nurses in the health sector, the reduction in the numbers of this professional in developed and developing countries is a matter of concern for the managers of health systems. In this sense, incentives for nurses to migrate to other countries have aggravated the gaps in their countries of origin. Problems such as job dissatisfaction, weaknesses or restriction of social policies, disruptive practices that compromise social welfare, search for security and quality of

life improvements are some factors that accelerate the migratory flows[40].

Data from The World Health Report 2006 – Working Together for Health[38], show that the percentage of foreign-trained nurses working in Australia, Canada, the United Kingdom and the United States represents 5-10% of the nursing workforce in these countries. In New Zealand, 21% of the nursing staff are from other countries.

Kingmam[37] adds that 30% of registered nurses in Switzerland are foreigners; in at least one university hospital, 70% are from other countries; 84% percent of the Irish Nursing Registry newcomers were foreign-trained; after excluding the EU countries, they still add up to 60%. In the United Kingdom, 37,000 foreign nurses are waiting to meet the accreditation requirements.

A study[39] has shown the most coveted destinations: USA, the UK, Canada and United Arab Emirates (UAE). Nurses in the USA can earn up to 82.7% more than nurses in India. In Canada and the UAE, wage differences are modest, but up to 28% and 20%, respectively. Nurses in the United Kingdom are at a disadvantage when compared to those working in India.

In this polarity between the migratory flows, the professional formation, and the geographical distribution of HEIs, the Brazilian reality coexists with the increase in courses in the distance learning modality, as well as Nursing School night classes.

A CNS survey showed that the number of seats authorized by the Ministry of Education (MEC) for distance learning undergraduate courses in health care totaled around 690,000, considering data from June 2018. However, there is no consensus about the directions of distance learning in nursing education in Brazil. When mapping the higher education courses in nursing in the distance learning modality in the national scenario, they verified that it is expanding and allows the access to higher education (at undergraduate and postgraduate levels) to a larger number of students. Therefore, Nursing education has grown, especially at the level of postgraduate studies, even though it remains behind in relation to other areas[41].

Final considerations

The employability scenario requires that a nurse be capable of leading teams with multiple knowledge and practices, with a global view and interconnected with technological and cultural advances. Many educational institutions are advancing under this perspective; however, many others need to be guided regarding their theoretical and pedagogical constructs to ensure that, in the near future, people have better health indicators and a bidirectional sense of satisfaction and appreciation can be identified between nurse practitioners and plural societies.

Therefore, considering the distortions concerning the unequal distribution of the number of nursing professionals in the Brazilian States, between capitals and the countryside, it seems vital that the public authorities assume control of this process, by offering nursing courses that are adequate to local realities and to the demands of global nursing formation, in the territories lacking nursing professionals, especially in the countryside of a continental country, such as Brazil.

Collaborations

MA Frota and MCM Wermelinger: Study conception and design. LJES Vieira and RSM Queiroz: Writing of the manuscript and critical review. FRG Ximenes Neto and RF Amorim: Approved the version to be published.

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