THEMATIC SESSION 80th YEAR OF NUTRITION HISTORY IN BRAZIL

Nutritionist's job market: 80 years of history

Mercado de trabalho do nutricionista: 80 anos de história

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ABSTRACT

Objective

To analyze the increase in the number of nutritionists and the aspects of the job market in the last decade.

Methods

Critical test based on literature review and official data provided by nutrition councils and other entities.

Results

There was an average yearly increase of 8,248 nutritionists in the period from 2010 to 2017, having the largest contingent of professionals concentrated in the Brazilian Southeast region. In 2017 there were 126,539 nutritionists registered in the country's ten regional councils, practically twice as much as in 2009 (60,554 nutritionists). Even though the last nationwide research on the profile of nutritionists was performed in 2006, the production of local studies showed that more than half of the professionals voluntarily continued their education after graduating. In 2018 the Federal Council of Nutritionists updated the areas of work with details

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divided in subareas, segments and subsegments. Public spaces for food security, primary health care and sports nutrition are examples of new fields for the nutritionist. In the period of analysis there was an increase of 58.9% of the wage floor, however, still below the national average and other health professionals, and with longer working hours. The current wage floor for nutritionists is R\$2,558.05.

Conclusion

In addition to the increase in the number of professionals, there were adjustments in specific labor legislation, as well as geographical repositioning, diversification and expansion of the job market. It is necessary to move ahead, mainly in what concerns a more extended and holistic understanding of the profession.

Keywords: Job Market. Nutrition. Nutritionists. Professional Practice.

RESUMO

Objetivo

Analisar a expansão do número de nutricionistas e aspectos do mercado de trabalho do profissional na última década.

Métodos

Ensaio crítico realizado com base em revisão da literatura e em dados oficiais fornecidos pelos Conselhos e outras entidades da profissão.

Resultados

Houve um aumento médio de 8.248 nutricionistas por ano, no período de 2010 a 2017, com manutenção do maior contingente de profissionais na região Sudeste. Em 2017 existiam 126.539 nutricionistas registrados nos dez conselhos regionais do país, praticamente o dobro de 2009 (60.554 nutricionistas). Apesar da ausência de pesquisa nacional sobre o perfil do nutricionista desde 2006, estudos regionais ou locais mostraram que mais da metade dos profissionais buscou a continuidade da formação. Em 2018 o Conselho Federal de Nutricionistas atualizou as áreas de atuação com detalhamento em subáreas, segmentos e subsegmentos. Equipamentos públicos de segurança alimentar, atenção básica e nutrição esportiva são exemplos dos novos campos de atuação. No período de análise houve aumento de 58,9% do piso salarial, no entanto, ainda abaixo da média nacional e de outras profissões da saúde, e com maior jornada de trabalho. Atualmente o piso salarial nacional do nutricionista é de R\$2.558,05.

Conclusão

Além do aumento no número de profissionais, houve ajustes na legislação trabalhista específica, bem como reposicionamento geográfico, diversificação e ampliação do mercado de trabalho. É necessário avançar na atuação, principalmente no que tange ao entendimento mais ampliado e holístico da profissão.

Palavras-chave: Mercado de Trabalho. Nutrição. Nutricionista. Prática Profissional.

INTRODUCTION

The profession of nutritionist, regulated in Brazil by Law No.8,234, dated September 17, 1991 [1], will complete 80 years of existence in 2019. Its regulations have undergone constant changes [2], seeking to contemplate the designs of the policies that must govern the profession, with emphasis on the *Política Nacional de Alimentação e Nutrição* (PNAN, National Food and Nutrition Policy) [3] and the *Política Nacional de Segurança Alimentar e Nutrição* (PNSAN, National Policy on Food and Nutrition Security) [4].

Throughout the decades, one can observe the intense increase in the number of both undergraduate courses and professionals, with concomitant expansion and diversification of the fields of activity [5,6]. In 2009, a study on the 70 years of history of the nutritionist in Brazil identified 391 Nutrition Courses (324 in private and 67 in public institutions) and 60,554 registered nutritionists in Brazil [5].

The fields of professional activity are governed by the *Conselho Federal de Nutricionistas* (CFN, Federal Council of Nutritionists) Resolution 600, in force since February 25, 2018, defining new attributions and numerical minimum reference parameters per area [7].

Simultaneously, the CFN updated the Nutritionist Code of Ethics and Conduct (CFN Resolution 599/2018), proposing innovations that consider the advances and new nuances of professional care in the 21st century [8].

The objective of this article is to analyze the expansion of the number of nutritionists and the aspects of the job market (professional fields, wage floor and working hours) in the last decade.

METHODS

A systematic bibliographical survey was carried out in the Scientific Electronic Library Online (SciELO) and in the National Library of Medicine (PubMed) databases, aiming to capture scientific articles about the number of professionals and the job market in the last 10 years. The following parameters were used: market; job; nutritionist; nutrition; professional activity; salary and combinations thereof. After reading the titles and abstracts eight articles of interest were listed. To incorporate a greater number of articles, the "snowball" technique [9] was used, which uses reference chains to indicate the main authors in the theme. After this process was performed, 24 articles were selected.

To obtain data, there were exploratory visits to the websites of the following institutions: (1) *Conselhos Federal e Regionais de Nutricionistas* (Federal and Regional Nutritionist Councils); (2) *Associação Brasileira de Alimentação* (ASBRAN, Brazilian Association of Food and Nutrition) and a network of affiliated state associations; (3) *Federação Nacional dos Nutricionistas* (FNN, National Federation of Nutritionists) and trade unions; (4) Forum of the Federal Councils of Health Professionals and their respective councils; (5) Collaborating Centers in School Food and Nutrition programs. Contact was made via e-mail to request information on studies regarding the professional profile, minimum wage for the category, number of registered professionals, number of registered nutritionists in the *Programa Nacional de Alimentação Escolar* (PNAE, National School Nutrition Program) per region and/or state, among others.

RESULTS AND DISCUSSION

The expansion of the number of nutritionists in Brazil (2010-2017)

Based on the statistical figures of the CFN, it was possible to identify an average increase of 8,248 nutritionists per year in the period from 2010 to 2017. Annual growth ranged from 4,562 (2015) to 10,783 (2010) new nutritionists per year (Table 1). In 2017 there were 126,539 nutritionists registered in the country's 10 regional councils, practically twice as much as in 2009 (60,554 nutritionists) [5].

There was also an increase in the number of nutritionists *per capita*: in 2009 there was 1 nutritionist for every 3,162 people [5], to 1 nutritionist for every 1,641 people in 2017 (Table 1).

It is evident that the expansion of the number of nutritionists in Brazil over the period is associated with the accelerated growth in the number of undergraduate courses in Nutrition [5,10], demanding adequate follow-up and constant evaluation with regard to professional training.

Year	Total number of nutritionists	Absolute growth in the number of nutritionists between each year	Number of nutritionists <i>per capita</i>
Jun/2009	60,554	4,337	1/3,162
2010	71,337	10,783	1/2.674
2011	80,519	9,182	1/2,389
2012	87,501	6,982	1/2,217
2013	95,936	8,435	1/2,095
2014	104,196	8,260	1/1,946
2015	108,758	4,562	1/1,880
2016	117,388	8,630	1/1,756
2017	126,539	9,151	1/1,641

Table 1. Total number of nutritionists, annual growth and relation of nutritionists per capita in Brazil from 2010 to December 2017.

Note: Elaborated from the data of the Federal Council of Nutrition and population data of the Brazilian Institute of Geography and Statistics.

The same shall proceed regarding the profession itself, which will require greater monitoring and inspection of nutritionists and employers to comply with the health-field legislation.

The largest contingent of nutritionists is still concentrated in the Southeast region of the country, which concentrates practically half of the nutritionists in Brazil, as historically verified [5].

The analysis for the year 2017 points to a change of position in the state of *Ceará*, now among the top 10 states with the highest number of nutritionists. The difference between the two periods studied was higher in the states of the Northeast region, moving from third to second position in the Brazilian ranking with the highest number of nutritionists (Table 2), and with the highest growth percentage between the periods studied (8.1%). The South region moved to third place in the total number of nutritionists, despite the increase in the number of professionals (Table 2), but with the best proportion of professionals per capita (1/1,430) (Table 3). The Northeast is in fourth place in relation to this proportion, with one nutritionist for every 2,103 people, higher than the Brazilian average (1/1,641). Despite the growth in the number of professionals, the Northeast region is still below the national Brazilian average. The North region continues with the lowest percentage of nutritionists and the highest proportion of professionals *per capita* (1/3,037).

Although there is no recommendation regarding the desirable number of health professionals *per capita*, nutritionists continue to represent the smallest contingent. The respective government bodies of these fields [11] report the following proportions: 1 nurse for every 421 people; 1 doctor for every 491 people; 1 dentist surgeon for every 664 people; and 1 pharmacist for every 1,030 people. The number of nutritionists is also smaller than that of physical therapists and occupational therapists, which make up a proportion of 1/863 people, and exceeds the number of speech therapists with a *ratio* of 1/4,895 people.

The fields of action of the brazilian nutritionist

The last study with data regarding the sociodemographic profile of Nutrition professionals was carried out in 2005, and a new national research is currently underway [12]. The importance of this update is emphasized in order to understand the current profile of the profession and to improve the actions of the councils in response to the needs pointed out by the professionals. The absence of such information makes it impossible to analyze the impact of public policies, such as the relationship

Chata	2009 (a)		2017	2017 (b)		Percentage	
State -	Ν	%	N %		difference (b-a)	difference (% b-a)	
São Paulo	17,254	28.5	32,736	25.9	15.482	-2.6	
Rio de Janeiro	8,559	14.1	14,818	11.7	6.259	-2.4	
Minas Gerais	5,523	9.1	12,328	9.7	6.805	0.6	
Rio Grande do Sul	5,079	8.4	8,496	6.7	3.417	-1.7	
Paraná	4,143	6.8	7,462	5.9	3.319	-0.9	
Bahia	2,393	4.0	7,493	5.9	5.100	1.9	
Distrito Federal	2,152	3.6	3,704	2.9	1.552	-0.7	
Santa Catarina	1,853	3.1	4,770	3.8	2.917	0.7	
Pará	1,447	2.4	2,278	1.8	831.000	-0.6	
Pernambuco	1,423	2.3	4,200	3.3	2.777	1.0	
Amazonas	1,192	2.0	1,848	1.5	656.000	-0.5	
Goiás	1,077	1.8	3,021	2.4	1.944	0.6	
Espírito Santo	1,044	1.7	2,400	1.9	1.356	0.2	
Ceará	921,000	1.5	3,193	2.5	2.272	1.0	
Rio Grande do Norte	830,000	1.4	2,788	2.2	1.958	0.8	
Paraíba	809,000	1.3	2,385	1.9	1.576	0.6	
Mato Grosso	737,000	1.2	1,489	1.2	752.000	0.0	
Mato Grosso do Sul	677,000	1.1	1,528	1.2	851.000	0.1	
Rondônia	648,000	1.1	705,000	0.6	57.000	-0.5	
Alagoas	663,000	1.1	1,460	1.2	797.000	0.1	
Piauí	619,000	1.0	1,976	1.6	1.357	0.6	
Maranhão	394,000	0.7	2,367	1.9	1.973	1.2	
Amapá	329,000	0.5	399,000	0.3	70.000	-0.2	
Sergipe	135,000	0.2	1,365	1.1	1.230	0.9	
Tocantins	119,000	0.2	395,000	0.3	276.000	0.1	
Acre	96,000	0.2	177,000	0.1	81.000	-0.1	
Roraima	79,000	0.1	104,000	0.1	25.000	0.0	
Others	359,000	0.6	654,000	0.5	295.000	-0.1	
Total - Brazil	60,554	100.0	126,539	100.0	65.985	110.0	

Note: Elaborated from the data of the Federal Council of Nutrition.

Table 3. Number of nutritionists and the proportion of nutritionists per capita in the 5 Brazilian regions in 2017.

Region	Population	Number of nutritionists	Proportion
North	17,936.201	5,906	1/3,037
Northeast	57,254.159	27,227	1/2,103
Southeast	86,949.714	59,882	1/1,452
South	29,644.948	20,728	1/1,430
Midwest	15,875.907	9,742	1/1,630
Others	-	3,054	-
Brazil	207,660.929	126,539	1/1,641

Note: Elaborated from the data of the Federal Council of Nutrition² and population data of the Brazilian Institute of Geography and Statistics.

between skin color, ethnicity and social class in relation to affirmative actions, introduced in the admission process of universities in the country [13]. In addition to the absence of national data for nutritionists, there was also a lack of studies with this focus, as already pointed out in the study about the 70 years of history of the profession [5].

Local studies reinforce that Nutrition is a profession majoritarily composed of women, most of them under 30 years-old, with an average of 80% working in the field. More than half of the professionals continued their education after graduating (through a specialization, a master's or a doctorate degree), primarily in the clinical area [14-18]. It should be noted that the expansion in the number of undergraduate courses in Nutrition provided a greater absorption of nutritionists as professors in higher education institutions.

Regarding the fields of activity, the CFN Resolution No.380/2005 defined seven areas, which were updated in 2018, by the CFN Resolution No.600 [7] (Table 4). The most significant changes were the withdrawal of the specific "Marketing" area and the detailing in subareas, segments and subsegments, reflecting the great expansion of Nutrition in recent years (Table 2). The area of Nutrition in Collective Health, for example, is divided into three Subareas, among them: Institutional Policies and Programs, composed of 5 segments and 9 subsegments [7].

Vasconcelos & Calado [5] had already signaled prospects for changes in the nutritionist job market, experienced today through the growth of new fields. The example is that the search for better physical conditioning, sports and aesthetic development, has promoted areas related to sports nutrition and aesthetic nutrition.

Also, it is observed that the expansion of tourism in Brazil has broadened the field of work of the nutritionist, for example, to hotel and gastronomy. In the clinical area, many professionals started taking care of patients at the patient's home or place of work (in Brazil, a profession called "Personal Diet"). Nutritionists have developed nutritional advice for nurseries/schools and companies: they organize menus, carry out training and actions of food and nutritional education. The work focused on food behavior, historically conducted in clinics by nutritionists in the clinical area, has recently been called Nutritional Coaching, although the CFN has already positioned itself not to recognize it as a specialty [7].

Regarding the updating of the legal instruments that govern professional activity, the reformulation of the Code of Ethics and Conduct of the Nutritionist [8] has brought changes, seeking to

	CFN Resolution No.600/2018			
CFN Resolution No.380/2005	Field		Seg ²	Subseg ³
Nutrition in collective eating programs	Nutrition in collective eating programs	1	4	2
Clinical nutrition	Clinical nutrition	9	-	-
Sports nutrition	Nutrition in sports and physical activities	-	-	-
Collective health-care	Nutrition in collective health-care programs	3	11	9
Food industry	Nutrition in food production, industry and trade	3	11	-
Teaching	Nutrition in teaching, research and extension programs	3	-	-
Marketing in the fields of food and nutrition		-	-	-

Table 4. Changes in the fields of activity of nutritionists. Brazil,	2018.
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Note: ¹Total of Subareas; ²Total of Segments; ³Total of Subsegments. Source: Resolutions of the Federal Council of Nutrition (CFN). ensure coherent and committed behaviors regarding people's health. Among them are the prohibition of publishing their own or third parties' body images, as a way of disseminating protocols, products, equipment or techniques, even when expressly authorized, and the impediment of performing or associating activities of dietary prescription and nutritional consultation in places whose objective is the commercialization of foods, food-related products, herbal medicines, nutritional supplements, equipment or utensils linked to the food and nutrition area.

Nutrition has consolidated itself, above all, through the implementation of public policies and programs that include nutritionist in their scope, with innumerable advances in the last years that have directly influenced the fields of work and professional activity. It is highlighted the PNAN, which has undergone an update in 2012, and aims to consolidate itself as a reference for the challenges of nutrition in the *Sistema Unico de Saúde* (SUS, Unified Public Health System), to align its recommendations with the *Política Nacional da Atenção Básica* (PNAB, National Primary Care Policy) and propose an adequate interlocution with the PNSAN [3,4,19,20]. The creation of the *Núcleos de Apoio à Saúde da Família* (NASF, Family Health Support Centers) in 2008, in the context of PNAB, also collaborated with the field of nutrition [21]. The number of NASF units implemented increased from 856 in 2009 to 2,201 in 2017 [22]. A historical follow-up of the implementation of NASF units until 2013 indicated that approximately 70% of the teams had nutritionists [23], which would mean a total of 1,540 nutritionists currently working in primary health care. It is noteworthy that from 2009 to 2017, the increase in the hiring of NASF teams in Brazil was 157%, having an increase of 150% until 2013 [22].

The PNSAN and the *Sistema Nacional de Segurança Alimentar e Nutricional* (SISAN, National System of Food and Nutrition Security) also supported the expansion of the field of nutrition. Several programs aimed to promote *Segurança Alimentar e Nutricional* (SAN, Food and Nutrition Security) and public facilities, such as government-backed economy restaurants, community kitchens, food banks, family agriculture food distribution units, have all counted with the aid of a nutritionist [24]. Another consequence of the advance in this field was the institution of the *Política Nacional de Agroecologia e Produção Orgânica* (PNAPO, National Policy on Agroecology and Organic Production), in 2012, increasing the possibility of intersectoral action [25].

In addition, the consolidation of the nutritionist role in the PNAE has significantly boosted the process of internalization of the profession due to the mandatory hiring of nutritionists in municipalities as technical leaders [26].

However, studies with NASF nutritionists revealed actions that were not aligned with the principles of SUS and the SAN Policy, prevailing practices anchored in the biomedical model [21,23].

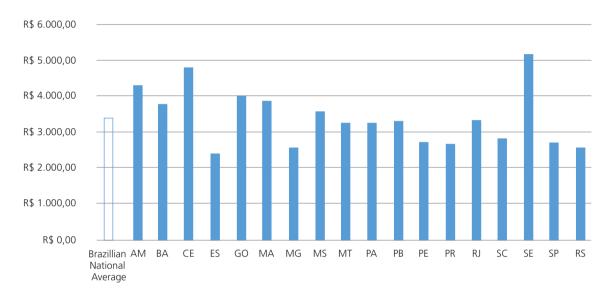
In addition to expanding the fields of the nutritionist, it is necessary to move towards compliance with standards regarding the number of professionals in the various activities. Research in 467 cities in Brazil in 2014 found that 88% had inadequate numerical parameters of nutritionists working in the PNAE.

The nutritionist's wage floor and working hours

The national wage floor of nutritionists currently stands at BRL2,558.05 for 44 weekly hours, corresponding to an increase of 58.9% in the period from 2010 to 2017 [27]. However, this figure falls short of the 83.7% increase in Brazil's minimum wage in the same period. As a comparison, the national wage floor for a doctor working 20 hours a week in 2017 was BRL13,847.93 [11],

for dentists it was BRL2,811.00 [11] and for nutritionists it was BRL1,086.07. These data show the discrepancy of salaries among the health-care fields and explain, at least partially, the results found in studies with nutritionists from several Brazilian regions [15-17], that indicated remuneration and working hours as sources of dissatisfaction.

The salary of the nutritionist varies according to the 18 state unions existing in the country (Figure 1). The largest is in the state of *Sergipe*, with a wage floor of BRL5,162.85 (5.4 minimum wages), and the lowest in the state of *Espírito Santo*, with a wage floor of BRL2,400.00 (2.5 minimum wages). A bill was proposed in 2010 (Bill No.6.819/2010), establishing a 30-hour work week, a minimum number of nutritionists in certain fields and an additional health insurance [28]. However, the project is still awaiting the formation of a Temporary Committee by the National Congress Board.





Note: *No information was found for the states of Acre, Alagoas, Piauí and Tocantins. There are no trade unions in the states of Amapá, Rondônia, Roraima and the Federal District.

BA: Bahia; ES: Espírito Santo; MA: Maranhão; PA: Paraíba; PE: Pernambuco; RJ: Rio de Janeiro; SE: Sergipe; RS: Rio Grande do Sul.

Source: Elaborated from the data of the National Federation of Nutritionists and State Unions.

In addition to the changes in the specific legislations for nutritionists [7,8], in recent years there have also been changes in the Brazilian labor legislation. In 2017, the Law No.13.467 amended more than 100 articles on the Brazilian *Consolidação das Leis de Trabalho* (CLT, Consolidated Labor Laws) with a Labor Reform that deliberated on working days, vacations, outsourcing, flexibilization of temporary and intermittent contracts, among others. These changes reflect a significant loss of labor rights, which, of course, will affect several nutritionists.

CONCLUSION

The Brazilian nutritionist has been challenged by the characteristics of the food system, the contemporary ways of producing, selling, advertising, access and consumption of food [29], as well as health indicators, which place different nutritional conditions as public health issues. Thus, it is

necessary to better train nutritionists, seeking not only the understanding of this global and modern food scenario, but also the sociocultural aspects of the subjects [30].

In recent years, Brazil has experienced political changes, which put at risk the continuation of important social advances. The budgetary cuts in health, education, social and agrarian development should negatively affect the aforementioned advances, implying the weakening of public policies aimed at health care, the reduction of fields of work and precariousness of labor conditions, with considerable steps backwards in actions of promotion of health and the construction of a sustainable food system. A good example is the decrease in NASF hiring in recent years.

In summary, the profession of nutritionist has shown a significant growth in recent years. In addition to the increase in the number of professionals, there were improvements in specific labor legislation, as well as geographical repositioning of professionals, diversification and expansion of the labor market. Although there has been an increase in salaries, it continues to fall far short when compared to the professional responsibilities. In this sense, it is highlighted the importance of the participation of nutritionists and associations in movements towards a valorization of the professional. Considering the increase in the number of professionals, it is necessary to align the professional formation, ensuring the same progress in the quality of the professional activity of the nutritionist in Brazil, while strengthening the commitment to the human right to adequate food.

CONTRIBUTORS

CG GABRIEL, AA FAGUNDES and C SOAR were responsible for the conception of the study and for the approval of the final version of this article. JTC OLIVEIRA, TC SILVA, and BL SILVA, were responsible for the collection, analysis and interpretation of data, as well as for the approval of the final version of this article.

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