

Profile and performance of nutritionists in Primary Health Care

Perfil e atuação de nutricionistas na Atenção Primária à Saúde

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ABSTRACT

Objective

To describe the profile and performance of nutritionists in Primary Health Care.

Methods

A cross-sectional study was carried out, and all nutritionists in two municipalities of *Paraíba*, Brazil, were interviewed. Information was collected through structured interviews on demographic characteristics, professional qualification, development of food and nutrition activities, knowledge and use of essential bibliography for the work in Primary Care.

Results

In one municipality there were 28 teams of the Family Health Strategy and in the other, nineteen teams. In all, nineteen nutritionists were interviewed, fourteen of whom were working in the health teams and five were working exclusively in the Family Health Support Centers. All but one were women and the majority were between 20 and 39 years; the majority (n=10) had no graduate training. Nutritionists from the basic health teams developed more public health nutrition actions, such as defining nutritional care protocols and vitamin A and iron supplementation than those from the Family Health Support Centers (11 *versus* 1; and 13 *versus* 1, respectively). About half were satisfied with work in general, and dissatisfaction was related to deficiencies in the availability and quality of anthropometric equipment, physical structure and material.

Conclusion

Nutritionists work in food and nutrition actions in collective health, emphasizing the importance of qualification and practices that better combine the programmatic agenda of this area with Primary Care.

Keywords: Employer performance appraisal. Nutrition, public health. Primary health care.

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RESUMO

Objetivo

Descrever o perfil e a atuação de nutricionistas na Atenção Primária à Saúde.

Métodos

Estudo transversal, tendo sido entrevistados todos os nutricionistas em atividade em dois municípios da Paraíba, por ocasião da pesquisa. Foram coletadas informações sobre características demográficas, qualificação profissional, desenvolvimento de ações de alimentação e nutrição, conhecimento e utilização de bibliografia essencial para o trabalho na Atenção Básica, por meio de entrevistas estruturadas.

Resultados

Em um município atuavam 28 equipes da Estratégia Saúde da Família e no outro, 19. Ao todo, foram entrevistados 19 nutricionistas, 14 dos quais desenvolviam atividades nas equipes de saúde e 5, exclusivamente nos Núcleos de Apoio à Saúde da Família. Todos, exceto um, eram mulheres e a maioria tinha entre 20 e 39 anos de idade; a maioria (n=10), sem formação de pós-graduação stricto ou lato sensu. Nutricionistas das equipes básicas de saúde desenvolviam mais ações de nutrição em saúde pública, como definição de protocolos de atenção nutricional e suplementação de vitamina A e ferro do que os dos Núcleos de Apoio à Saúde da Família (11 versus 1; e 13 versus 1, respectivamente). Cerca da metade estava satisfeita com o trabalho em geral, sendo a insatisfação relacionada a deficiências na disponibilidade e qualidade de equipamentos antropométricos, estrutura física e material de consumo.

Conclusão

Os nutricionistas atuam em ações de alimentação e nutrição em saúde coletiva, ressaltando-se a importância de qualificação e práticas que dialoguem melhor com a agenda programática da área com a Atenção Básica.

Palavras-chave: Avaliação de desempenho profissional. Nutrição em saúde pública. Atenção primária à saúde.

INTRODUCTION

Primary Health Care (PHC), also called Basic Care in Brazil, is the first level of contact of individuals, families and communities with national health systems, and has been designed to address the main health needs of communities, through actions of promotion, prevention, treatment and rehabilitation, both individually and collectively [1]. In Brazil, the Family Health Strategy (FHS) was adopted as a structuring model of Primary Care [2].

The Brazilian Ministry of Health establishes that teams working in the FHS are multidisciplinary and composed of at least a general practitioner or specialist in Family Health or a Family and Community physician; a general nurse or specialist in Family Health; a nursing technician or assistant; and community health workers [3]. However, evaluative research on FHS has pointed to limitations that include hegemonic and disarticulated actions that impair the comprehensiveness of care [4]. At this

context, the Family Health Support Center (FHSC) was established with the objective of supporting and expanding the actions developed in the FHS with the inclusion of professionals from other areas of knowledge [5].

With the perspective of increasing the resolution and impact on the health situation of people and communities [3], the nutrition area in PHC should include the development of strategies to respond to the main demands associated with eating disorders, nutritional deficiencies, malnutrition and obesity; development of therapeutic projects; food and nutrition diagnosis of the population; promotion of food and nutrition safety; and definition of nutritional care protocols [6]. In this sense, the nutritionist is considered the only professional with adequate training to act in the promotion of healthy food practices and food and nutrition safety, effecting the promotion and recovery of health and the prevention of diseases [7]. However, the insertion of this professional is still incipient in Brazil [7-9].

Currently, only 17.5% of the FHS teams have a nutritionist and 21.8% have a matrix support of this professional through FHSC [10,11]. The presence of this professional in these scopes, however, has shown a positive evolution over the years [12], becoming eminent the need to reveal aspects of these workers as possible drivers of transformation of health practices [13].

The purpose of this study was to characterize the profile and performance of nutritionists working in PHC.

METHODS

A cross-sectional study was carried out with nutritionists from FHS and FHSC teams in two municipalities in the state of *Paraíba*, Brazil which are similar as to the geographical location (located in the metropolitan region of the state capital, with access to the network of services available there), degree of urbanization (almost 100%), demographic and social indicators (index of human development at medium level – 0.748 in one of the municipalities and 0.649 in the other) and organization of Primary Health Services (population coverage of the FHS of about 100%). In each municipality, all active nutritionists were included in the study.

Data collection took place in the facilities of health units, between July and December of 2014, being carried out by professionals and students of the health area, under the supervision of the research coordinator. The quality control of the study included training and standardization of the interviewers, construction of an instructions manual for application of the questionnaires and conducting a pilot study in another municipality of *Paraíba*.

The information was obtained by interview, using a structured questionnaire with closed questions that approached demographic and labor characteristics; professional qualification; professional practices and developed actions on food and nutrition; knowledge and use

of bibliographic sources essential to the development of food and nutrition actions; and job satisfaction. Demographic characteristics included gender, age, marital status (whether living with or without partner) and whether they had children. Investigated labor characteristics included information about type of bond, existence of another job, weekly workload and perception about remuneration. Professional qualification included the completion of a graduate course (training aimed at working in PHC). The description of professional practices included home visits, individual care, therapeutic group, population training, bureaucratic tasks, team meetings, community meetings and meetings with the central level of the health secretariat.

Investigated actions on food and nutrition were based on the programmatic agenda of care of PHC, referring to the area of food and nutrition, as recommended by the Ministry of Health [6,8,14,15]. The actions contemplated, applicable to both nutritionists who work in the FHS and FHSC teams, were: food and nutrition diagnosis; preparation, revision, adaptation, standardization and definition of nutritional care protocols; promotion of breastfeeding and healthy complementary feeding; promotion of healthy eating; diagnosis and identification of children at nutritional risk; food and nutrition surveillance with the use of food consumption data; Food and nutrition surveillance using anthropometric data; use of *Sistema de Vigilância Alimentar e Nutricional* (Sisvan) epidemiological data; activities linked to the vitamin A supplementation program; activities linked to the iron supplementation program; nutritional care for children with malnutrition or nutritional risk; nutritional care for overweight children; nutritional care for children with specific nutritional needs (inborn errors of metabolism, celiac disease, HIV/AIDS, food intolerances, food allergies, eating disorders, prematurity and nephropathies); monitoring the nutritional status of children benefiting from the Family Grant Federal Program; monitoring of the Family

Grant Federal Program's health conditions; monitoring the nutritional status of children in the School Health Program; evaluation of the results of food and nutrition actions and their readjustment. These actions were investigated one by one through an introductory question stating: "Do you participate in the development of the following food and nutrition actions?"

Knowledge and use of bibliographic sources essential for the development of food and nutrition actions are related to the following (all available on the Brazilian Ministry of Health website at <http://portal.saude.gov.br/>): National Food And Nutrition Policy, National Primary Care Policy, National Health Promotion Policy, Matrix of food and nutrition actions in Primary Care, Food and Nutrition Surveillance System Protocols – Sisvan, FHSC Guidelines: Food Guide for the Brazilian population, Food Guide for children under two years old, General conducts Manual of National Vitamin A Supplementation Program, Operational Manual of National Iron Supplementation Program and Manual of orientations about the Family Grant Federal Program in Health. Knowledge and use of these sources was investigated by initially asking "Do you know the following technical materials/standards/protocols related to food and nutrition actions?" If so, the interviewer proceed "Do you use this material?" Answers were categorized in three groups: "I know and I use"; "I know but I do not use"; and "I do not know". The categories "I know but I do not use" and "I do not know" were grouped for analysis".

Satisfaction with work was related to the following aspects: physical structure, availability of material, availability and quality of equipment, link with the central level of the health secretariat, relationship among team members, relationship with the community and general satisfaction with work. The answers included three alternatives: satisfied, partially satisfied and dissatisfied. The partially satisfied and dissatisfied categories were grouped for analysis.

The collected data were organized in spreadsheets and typed in double entry. The validate application of the Epi Info software (Centers of Disease Control and Prevention, Atlanta, Georgia, United States) version 3.3.2 was used to analyze the consistency of the data. Descriptive analysis was carried out with frequency measures of the variables. Subsequently, the proportions found between the two work insertions of the nutritionist (FHS or FHSC teams) were compared using Fischer's test. The level of significance used to evaluate the differences in parameters was 5%. The analyzes were performed using Stata software (Stata Corporation, College Station, Texas, United States) version 12.0.

The research was approved by the Research Ethics Committee of the *Universidade Estadual da Paraíba* (Protocol nº 19689613.3.0000.5187). All the participants of the research signed the Free and Informed Consent Form.

RESULTS

In one of the municipalities there were 28 FHS teams and in the other, nineteen FHS teams. In all, nineteen nutritionists were interviewed, fourteen of whom were working in health teams and five exclusively in the FHSC. There were no refusals to participate in the study.

Only one of the nutritionists was male, the majority were between 20 and 39 years of age (n=11), had no children (n=14) and had not undergone graduate studies (n=10). Ten nutritionists were hired, nine had another job and fourteen perceived the payment as inadequate. Regarding professional practices, meetings with the community were the least mentioned. The majority (n=17) performed bureaucratic tasks, such as filling forms. Training to work on PHC and child health care was reported by nine of the professionals, while ten said they had received training in the National Food and Nutrition Policy or in food and nutrition actions in PHC. There

was a higher proportion of nutritionists who received these trainings among those working in the FHS teams compared to those working in the FHSC (Table 1).

Food and nutrition actions developed by the nutritionists are shown in Table 2. Most nutritionists reported performing food and nutrition actions advocated for PHC, with emphasis on practices for promoting eating habits, diagnosis and care for nutritional

deviations. However, community diagnosis (n=6), activities in the context of the vitamin A supplementation program (n=5) and the iron supplementation program (n=5) presented higher frequencies of negative answers. Differences were observed in the development of some food and nutrition actions, with a better situation among nutritionists of FHS teams: elaboration, revision, adaptation, standardization and definition of nutritional care protocols ($p=0.038$),

Table 1. Profile and characteristics of the performance of Primary Health Care (PHC) nutritionists in two municipalities of *Paraíba*, Brazil, 2014.

Variable	Total (n)	Place of performance		p
		FHS (n)	FHSC (n)	
<i>Demographic characteristics</i>				
Gender				0.737
Female	18	13	5	
Male	1	1	0	
Age (years)				0.664
20 to 29	6	4	2	
30 to 39	5	4	1	
40 to 49	8	6	2	
Children (yes)	5	4	1	0.603
<i>Qualification characteristics</i>				
Graduate studies in public health/family health/maternal and child health	9	8	1	0.184
Training to work in PHC	9	9	0	0.022
Training to work on child's health care	9	9	0	0.022
Training in PNAN or food and nutrition actions in PHC	10	10	0	0.011
<i>Labor characteristics</i>				
Employment relationship (civil servant)	9	6	3	0.444
Having another job (yes)	9	5	4	0.119
Weekly load (hours)				0.084
40	14	12	2	
20	5	2	3	
Adequate remuneration (yes)	5	5	0	0.172
<i>Professional practices</i>				
Home visit	19	14	5	1.000
Individual care	19	14	5	1.000
Therapeutic group	13	10	3	0.520
Bureaucratic tasks	17	12	5	0.532
Team meetings	18	14	4	0.263
Community meetings	8	7	1	0.267
Meetings with the central level of the health secretariat	15	10	5	0.258

Note: FHS: Family Health Strategy; FHSC: Family Health Support Center; PNAN: *Política Nacional de Alimentação e Nutrição* (National Food and Nutrition Policy).

use of Sisvan epidemiological data ($p=0.010$), development of actions in the context of vitamin A supplementation program ($p=0.006$) and the iron supplementation program ($p=0.006$) and follow-up of the Family Grant Federal Program's health conditions ($p=0.001$).

The Family Health Support Center Guidelines ($n=13$), the Matrix of food and nutrition actions in Primary Care ($n=10$) and the National Primary Care Policy ($n=6$) were the bibliographic sources with the highest frequencies of answers "I know but I do not use it/do not know". Regarding specific materials of the nutrition area, almost all nutritionists reported knowing and using them. Professionals from the FHS teams reported higher frequencies of knowing and using the National Primary Care Policy, the National Health Promotion Policy, the Food and Nutrition Surveillance System Protocols – Sisvan, the General conducts Manual of National Vitamin

A Supplementation Program and the Guidance Manual on the Family Grant Program in Health (Table 3).

When asked about jobsatisfaction, only two nutritionists indicated general dissatisfaction. Most were not satisfied with the availability and quality of anthropometric equipment, physical structure and material. The relationship with the community and with team members was positively assessed by most professionals (Table 4).

DISCUSSION

This study described the profile and performance of nutritionists allocated in basic units of the FHS or members of the FHSC in two municipalities of *Paraíba*. Regarding the demographic profile, the predominance of female

Table 2. Food and nutrition actions developed by Primary Health Care nutritionists in two municipalities of *Paraíba*, Brazil, 2014.

Activities developed	Total (n)	Place of performance		<i>p</i>
		FHS (n)	FHSC (n)	
Food and nutrition diagnosis with identification of vulnerable areas and risk groups.	13	11	2	0.262
Elaboration, revision, adaptation, standardization and definition of nutritional care protocols.	12	11	1	0.038
Encouraging, supporting and protecting breastfeeding and healthy complementary feeding.	19	14	5	1.000
Promotion of healthy eating.	19	14	5	1.000
Diagnosis and identification of children at nutritional risk.	18	14	4	0.263
Food and nutritional surveillance using food consumption data.	15	12	3	0.272
Food and nutritional surveillance using anthropometric data.	17	14	3	0.058
Use of epidemiological data from Sisvan.	16	14	2	0.010
Development of actions in the context of the vitamin A supplementation program.	14	13	1	0.006
Development of actions in the context of the iron supplementation program.	14	13	1	0.006
Nutritional care for children with malnutrition or at nutritional risk.	19	14	5	1.000
Nutritional care for overweight children.	19	14	5	1.000
Nutritional care for children with specific nutritional needs.	17	14	3	0.058
Follow-up of the nutritional status of children benefited by the Family Grant Program.	17	14	3	0.058
Follow-up of the health conditions of the Family Grant Program.	15	14	1	0.001
Follow-up of the nutritional status of children in the School Health Program.	17	13	4	0.468
Evaluation of the results of food and nutrition actions, re-adjusting them if necessary.	16	11	5	0.530

Note: FHS: Family Health Strategy; FHSC: Family Health Support Center; Sisvan: *Sistema de Vigilância Alimentar e Nutricional* (Food and Nutrition Surveillance System).

Table 3. Knowledge and use of materials needed to develop food and nutrition actions by Primary Health Care nutritionists in two municipalities of *Paraíba*, Brazil, 2014.

Materials you know and use	Total (n)	Place of performance		<i>p</i>
		FHS (n)	FHSC (n)	
National Food and Nutrition Policy	16	13	3	0.155
National Primary Care Policy	13	12	1	0.017
National Health Promotion Policy	15	13	2	0.037
Matrix of food and nutrition actions in Primary Care	9	8	1	0.184
Food and Nutrition Surveillance System Protocols	16	14	2	0.010
FHSC Guidelines: Family Health Support Center	6	3	3	0.262
Food Guide for the Brazilian Population	16	13	3	0.155
Food Guide for children under two years old	18	14	4	0.263
Manual of general conduct of the National Vitamin A Supplementation Program	16	14	2	0.010
Operational Manual of the National Iron Supplementation Program	14	12	2	0.084
Handbook of Guidelines on the Family Grant Federal Program in health	15	14	1	0.001

Note: FHS: Family Health Strategy; FHSC: Family Health Support Center.

Table 4. Satisfied with work of Primary Health Care nutritionists in two municipalities of *Paraíba*, Brazil, 2014.

Satisfied with work	Total (n)	Place of performance		<i>p</i>
		FHS (n)	FHSC (n)	
Physical structure	6	6	0	0.111
Availability of materials	7	6	1	0.366
Availability and quality of anthropometric equipment	3	3	0	0.376
Bond with the central level of the Health Secretariat	10	9	1	0.119
Relationship between team members	16	11	5	0.376
Relationship with the community	15	11	4	0.728
General satisfied with work	11	10	1	0.071

Note: FHS: Family Health Strategy; FHSC: Family Health Support Center.

nutritionists and in the age groups between 20–39 years is comparable to that verified in other studies, which revealed the feminization of the profession and the performance of young adults [9,16-18]. This profile may be related to the cultural connotation, in Brazil, of the role of women as caregivers [19] and the short time of existence of the profession [16].

The small number of nutritionists, especially those enrolled in FHSC, who indicated having participated in training to work in the PHC, in the nutrition actions directed to the Primary Care and in the child's health converges with previous reports [18-20]. However, complementary analyzes of the current study did not identify differences

in the knowledge of technical materials nor in the performance of actions of the nutrition area among those with and without graduate courses (data not shown). The training of the nutritionist directed to PHC is essential to minimize the difficulties of articulation between teaching and health service of the undergraduate courses in Nutrition [21]. The lack of training may be related to the precarious and temporary contracting of nutritionists, which, in turn, may lead them to exercise the profession in other places or areas of activity, characteristics found both in this (nine had another employment relationship) and in other studies [18,20]. Negative consequences may arise from these labor characteristics, such

as demotivation and turnover of professionals, difficulties in permanent education processes, weak bonds with the population and with the health team, and discontinuity of actions, which may impair the effectiveness of the FHS [18,20].

In the professional practices, the results of the present study emphasize that home visit and individual care are consolidated activities, while community orientation of the actions was less frequent. These findings are in agreement with those of previous researches [9,16,22] and are indicative of a fragmented work process that is focused on actions at the individual level and restricted to the physical limits of the health unit, as previously mentioned [18]. It is important to emphasize that at the family and community level, established as a priority in the nutritionist's role in Primary Care, the development of nutritional care protocols and the participation of therapeutic plans may represent an excellent opportunity for interdisciplinary practices suitable for identifying risk situations, recognition of the territory and interaction with other levels of care [23].

With regard to food and nutrition actions, nutritionists proved to be involvement with them, both at the level of care and of health promotion. These results, in addition to reflecting the importance of the nutritionist to the development of the activities that are inherent to them [16,17], show the simultaneous presence of the traditional biomedical model of care and the model based on health promotion and prevention of diseases, as suggested in another study [22]. Despite the epidemiological relevance of nutritional deficiencies of iron and vitamin A [6,14], five nutritionists answered they did not to develop actions within the supplementation programs with these micronutrients. This situation is worrying, since the absence of guidance and support from professionals in the health service can lead to problems of adherence to supplementation. In this sense, the importance of training and motivating professionals is

highlighted, in addition to the link between these and the community and the global vision of nutritional deficiency [24]. Other data that deserve attention is the performance of only 13 of the 19 professionals in the food and nutrition diagnosis and the non-use of Sisvan data by FHSC professionals was identified, distancing themselves from the Primary Care programmatic agenda regarding food and nutrition actions and with harm to planning, follow-up and evaluation of these actions [6].

Regarding the bibliographic sources, those that are specific and exclusive to the nutrition area were better known and used than those directed to work in PHC. Similarly, a previous study found that most nutritionists are familiar with the Food Guide for the Brazilian Population, the Food and Nutrition Surveillance Protocol, and the National Food and Nutrition Policy, but there are few who know the Matrix of food and nutrition actions in Primary Care [21]. The proper use of these materials enables the correct diagnosis of the nutritional status and the identification of associated risks [25]. Problems related to the use of technical documents in the PHC framework were similarly pointed out in previous studies addressing their use by health professionals in different scenarios and objectives [25-28]. The adequate use of these technologies is fundamental to the standardization and systematization of care, enabling a multidisciplinary, comprehensive, more qualified and effective care [25-27].

The lack of working conditions in relation to infrastructure, anthropometric equipment, resources for the development of daily activities, including those related to food and nutrition, found in a recent study with nurses, physicians and nutritionists of FHS teams [17], coincides with the main factors highlighted in this study. Difficulties related to the infrastructure of health facilities, including anthropometric equipment, were also highlighted in a literature review on growth surveillance in the country's Primary Health Care network [25]. Data from the year

2012 showed that in 17.0%, 20.3%, 34.7% and 49.1% of the Primary Health Care Units of the country there are, respectively, no children's scales, 150kg scales, anthropometric rules and anthropometers in conditions of use [29]. Lack of structure hinders the development of food and nutrition actions, motivation for work, the process of permanent education and the performance of the system [20,25]. On the other hand, satisfaction of the professionals of this study in the scope of human relations can generate commitment, supporting the decision-making and promoting co-responsibility for health status [30].

The results of the present study showed that professionals of the family health teams presented better mastery of materials in the area of nutrition in collective health, as well as greater involvement with nutrition actions than the professionals inserted in FHSC. These findings may be related to several factors. Firstly, explanations related to the intentional choice of the municipalities must be considered, since one of them has a work model that includes, since 2001, the insertion of nutritionists in the minimum FHS team and the development of food and nutrition actions in an articulated way, as an essential component of care. In this study, nutritionists included in the FHS teams were represented professionals more qualified to work, which seems to contribute positively in the field of the technical documents indispensable for the exercise of the profession and in the development of food and nutrition actions, in similar conditions to academic education. Because they represent more recent alternatives of professional performance, the difficulties that the nutritionist faces in the construction of his/her practice in the PHC are possibly more accentuated among professionals of FHSC.

Despite the statistical validity, it should be emphasized that the previous differences do not necessarily express higher qualification of one group in relation to the other, since the number of the professionals inserted in

FHSC involved in the study was very small and the groups are represented by professionals with specific attributions. It is incumbent upon FHSC nutritionists to provide matrix support to Primary Care teams for the expansion and improvement of care through interdisciplinary work, with experiences that have shown difficulties related to understanding the role of the FHSC and matrix support, as well as the development of activities of articulated form [9,18,23]. According to the FHSC creation, food and nutrition actions should be directed toward the promotion of healthy eating and attending to the greatest care needs [5], however, it seems to be an important reflection on this action so that professionals can structure processes with less individualizing and technician practices [9].

This study contemplated only the answers of the professionals themselves, which may have implicit information bias. Also, the information refers to professionals inserted in the reality of two municipalities, exclusively, of a single Brazilian state, with limitations as to the generalization power of the results. Among the advantages, all nutritionists working in the Primary Care of the two municipalities were included. In addition, the data were collected in an active and standardized manner, through interview, which prevents loss of information. Also, there were no refusals to participate in the interviews. However, results should be interpreted with caution due to the low number of FHSC nutritionists who participated in the research.

CONCLUSION

Nutritionists in FHS and FHSC teams work on actions of the food and nutrition programmatic agenda in PHC, including health promotion practices. Nutritionists' qualification and performance need a greater dialogue and interaction between food and nutrition area and PHC. Professional dissatisfaction is centered mainly on structural aspects. These findings

may help in the organization of health teams by pointing out weaknesses that need to be overcome.

CONTRIBUTORS

D FIGUEROA PEDRAZA contributed to the design, analysis and interpretation of data; essay writing and critical review of intellectual content; final approval of the version to be published. IS SANTOS contributed to the interpretation of the data; critical review of intellectual content; final approval of the version to be published.

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