FOOD AND NUTRITION IN COLLECTIVE HEALTH
DOI: 10.12957/demetra.2022.63954

DEMETRA
Alimentação, Nutrição & Saúde

Erika Cardoso dos Reis[1]
Carla Moronari de Oliveira Aprelini[3]
Tatielle Rocha de Jesus[2]
Carolina Perim de Faria[2]
Oscar Geovanny Enríquez-Martinez[3]
Maria del Carmen Bisi Molina[1,3]

[1] Universidade Federal de Ouro Preto, Escola de Nutrição, Ouro Preto, Minas Gerais, Brasil.

[2]Universidade Federal do Espírito Santo, Departamento de Educação Integrada em Saúde, Vitória, Espírito Santo, Brasil.

[3] Universidade Federal do Espírito Santo, Programa de Pós-Graduação em Saúde Coletiva, Vitória, Espírito Santo, Brasil.

Correspondence
Erika Cardoso dos Reis
erika.careis@gmail.com

Conditions for obesity care actions in primary health care in the Espírito Santo state

Condições para ações de cuidado da obesidade na atenção primária à saúde no estado do Espírito Santo

Abstract

Introduction: Obesity is a multifactorial disease with epidemic proportions frequently described as a risk factor for other comorbidities. Therefore, it is important to identify which conditions and actions are being carried out within the scope of Primary Health Care for the care of individuals with this disease. ***Objective***: To describe and discuss conditions and actions for the prevention and care of obesity available in Primary Health Care (PHC) in the Espírito Santo state (ES). ***Methods***: Observational descriptive study based on the PMAQ-AB - 3rd cycle. Modules I, II, and IV were evaluated considering variables related to the number of professionals and equipment, development of obesity care, and nutritional care actions. Chi-square tests were performed to investigate differences between regions. **Results:** 93.6% of the municipalities participated in the study. There was a shortage of nutritionists and physical educators across the system; in the northern region, nutritionists are present in 21% of the units and there are no physical educators. The number of equipment and materials available was low: 45% of the units in the state did not have a scale (200 kg) and half of them reported not having teenager health records. In the southern region, 54% of the units did not have a pressure measuring device with an armband suitable for obese adults. Only 10% of professionals reported offering integrative and complementary practices and half of them were unaware of the Healthy Program. ***Conclusion***: The actions developed by PHC teams related to health promotion, nutritional care, and obesity prevention and care are not sufficient to cope with obesity in ES, and neither are the equipment and structures available.

Keywords: Obesity. Unified Health System. Primary Health Care. Health Care.

Resumo

Introdução: A obesidade é uma doença multifatorial com proporções epidêmicas que tem sido frequentemente descrita como fator de risco para outras comorbidades. Portanto, é importante identificar que condições e ações estão sendo realizadas no âmbito da Atenção Primária à Saúde (APS) para o cuidado dos indivíduos com a doença. ***Objetivo***: Descrever e discutir as condições e ações de prevenção e cuidado da obesidade disponíveis na APS do estado do Espírito Santo (ES). ***Métodos***: Estudo observacional descritivo baseado no PMAQ-AB - 3º ciclo. Foram avaliados os módulos I, II e IV, considerando as variáveis relacionadas ao número de profissionais e equipamentos, desenvolvimento de ações de cuidado da obesidade e de atenção nutricional. Foram realizados testes de qui-quadrado para verificar diferenças entre as regiões. ***Resultados***: 93,6% dos municípios participaram do estudo. Observou-se

carência de nutricionistas e educadores físicos em toda a rede. Na Região Norte, o nutricionista está presente em 21% das unidades e não há educadores físicos. Foi baixo o quantitativo de equipamentos e materiais disponíveis. Quase metade das unidades de saúde do estado não tinha balança (200 kg) e caderneta do adolescente. Na Região Sul, 54% das unidades não apresentavam aparelho de pressão com braçadeira para pessoas adultas obesas. Apenas 10% dos profissionais referiram ofertar práticas integrativas e complementares (10%) e a metade não tinha conhecimento do Programa Academia da Saúde. ***Conclusão:*** As ações desenvolvidas pelas equipes da APS relacionadas a promoção da saúde, atenção nutricional, prevenção e cuidado da obesidade, além dos equipamentos e estruturas disponíveis, não são suficientes para o enfrentamento da obesidade no ES.

Palavras-chave Obesidade. Sistema Único de Saúde. Atenção Primária à Saúde. Assistência à Saúde.

INTRODUCTION

Obesity is a multifactorial disease of epidemic proportions often described as a risk factor for other comorbidities.[1] In addition, it affects different age groups, socioeconomic levels, and genders,[2] being considered one of the main causes of preventable deaths in the world.[3] In 2018, the Unified Health System (SUS) carried out 12,438 hospitalizations due to obesity, which represented an impact of BRL 64.3 million.[4,5]

Within the scope of Primary Health Care (PHC), the Ministry of Health recommends actions to promote health and prevent obesity. Some of these actions include anthropometric evaluation, multiprofessional and interdisciplinary work for comprehensive and humanized care, self-care support, and encouragement of body practices, physical activity, and a healthy and adequate diet, in addition to the formation of groups on health support and education, among others.[6] Actions at this level of care are very important, as PHC is the main means of access to the health system for the Brazilian population, in addition to being closer to the community, thus favoring the development of strategies.[7,8]

In addition, PHC works as a structuring axis of an effective health system that can help reduce costs by avoiding high complexity, in addition to minimizing inequities in access and increasing the efficiency of the service provided, which reinforces its role in facing health problems,[9] in particular of chronic conditions such as obesity. Therefore, actions aiming prevention and care of overweight individuals can and should be carried out within the scope of PHC, through effective strategies, innovative approaches suitable to the context, and comprehensive care for the user.[10]

Despite the advances made in terms of access and quality of health services in Brazil, there are still many challenges to be overcome. In the quest to improve actions and services, government initiatives were implemented, including the Program for Improving Access and Quality of Primary Care (PMAQ-AB).[11,12] This program was created in 2011 with the aim of increasing access and improving the quality of health actions and services offered in basic health units (UBS) and encouraging teams and managers to achieve these results.[13]

The PMAQ makes it possible to assess the structure (physical and human resources) available for carrying out health actions and services, in addition to recording the actions developed by PHC health professionals aimed at different life stages and health conditions.[13]

Since health services must be equipped to adequately serve the obese population and that quality health care can help to achieve better health outcomes,[8] this article aims to describe and discuss the conditions and actions involving obesity prevention and care, developed in the PHC of different regions from the Espírito Santo (ES) state.

METHODS

This is a cross-sectional study based on public domain data from the external evaluation survey – PMAQ-AB, 3rd cycle – carried out by the Ministry of Health in partnership with research and higher education institutions in Brazil.[12]

Four teams, with four interviewers and one supervisor each, collected data in the ES state between July and November 2017, in the 74 municipalities that joined the PMAQ. The teams were trained and monitored during the information collection phase.[11,12]

Data were collected using an instrument provided by the technical team of the Department of Primary Care of the Ministry of Health, and divided into six modules: Module I (UBS) evaluated the infrastructure conditions, materials, supplies, and medicines of the UBS; Module II (Team) sought information about the team's work and the organization of user care; Module III (User) verified the satisfaction and perception of users regarding health services in terms of their access and use; Module IV (NASF) sought information about the work of the Family Health Support Center (NASF); Modules V and VI investigated the structure and work the of Oral Health section, regarding not only the structure of the UBS itself but also the team.[11,13]

In the present study, variables related to the number of professionals and equipment, development of obesity care actions, and nutritional care were selected. Thus, modules I, II, and IV, which focus on parameters related to the number of professionals in the team (excluding NASF), amount of equipment and materials, printed material and health care supplies, and care for individuals diagnosed with obesity (UBS and NASF), were analyzed.

Data were systematized and analyzed using the IBM Statistical Package for the Social Sciences (SPSS) software, version 20.0. We performed a Pearson's chi-square test to verify possible differences between the distribution of categorical data according to the state's 'health' regions (North, Central, Metropolitan, and South) as per the Regionalization Plan,[14] adopting a significance level of 5%.

The information used in this study was extracted from a public domain platform, therefore not requiring consideration and approval by the Ethics Committee for Research with Human Beings (CEP).

RESULTS

Of the 78 municipalities in ES state, 74 (94.9%) participated in the 3rd cycle of the PMAQ-AB (data not shown in the table). Module I evaluated the structure of 506 UBS, Module II evaluated 666 UBS teams, and Module IV, 23 NASF teams (figure 1).

Figure 1. Structure and teams of health units and teams of the Family Health Support Center included in the analyses, PMAQ - 3rd cycle (2017).

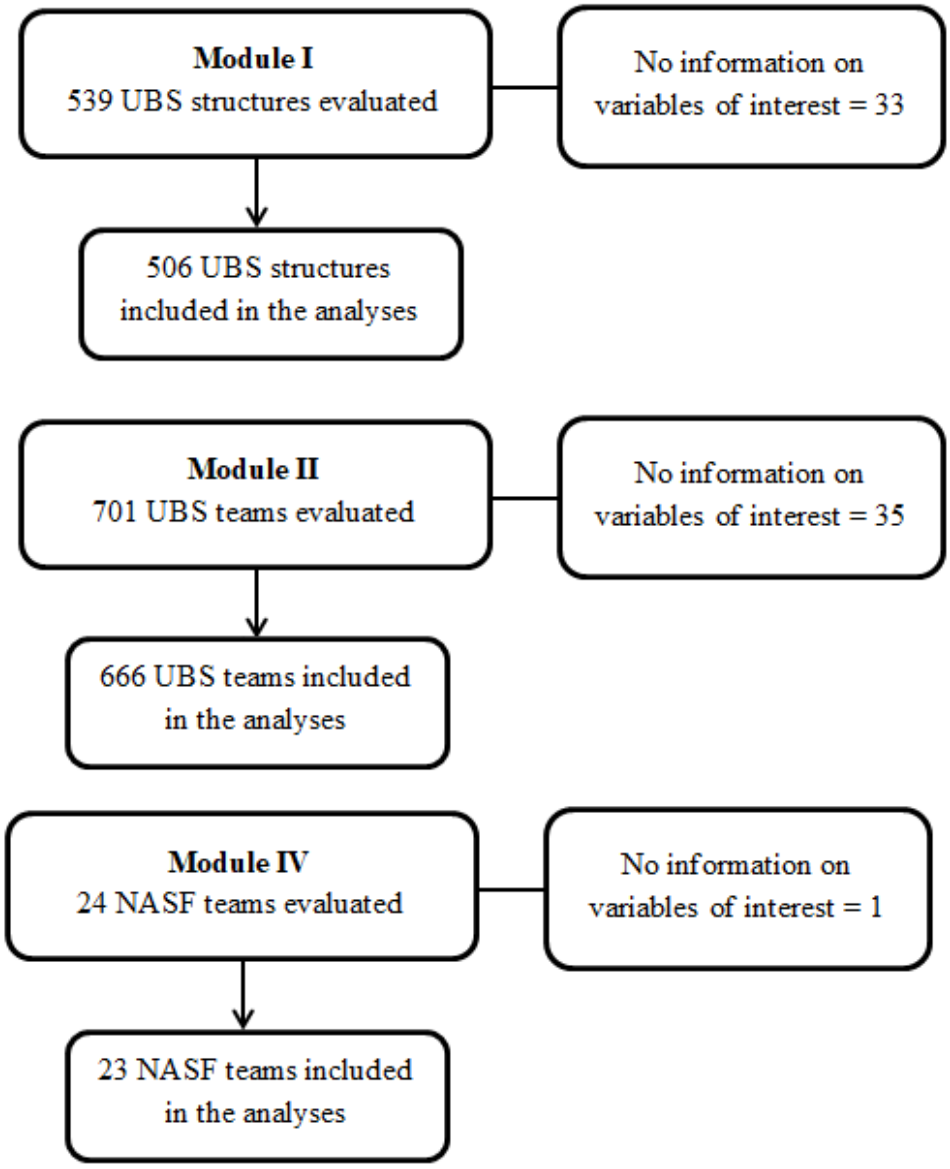

Table 1 shows the number of professionals, equipment, and materials used in health units for the prevention and care of obesity in the ES health regions in 2017. When analyzing the number of nutritionists and physical educators in UBS teams, it can be observed, in all health regions, that most teams have no nutritionist (71.0%) and the number differs significantly between regions ($p = 0.04$). In the North region, only 20.8% of the units have a nutritionist and there were never more than two nutritionists per team in either of the ES health regions. Most teams also lack physical educators in their composition and these are irregularly distributed ($p < 0.001$); the North region stands out, as no team has a physical educator. The Metropolitan region has more professionals in this area: 12.7% of the teams had more than two physical educators.

Regarding the equipment and materials available in the UBS, more than half of the health units in the Central (50.8%) and South (53.8%) regions do not have functioning pressure measuring devices with cuffs suitable for obese adults. In the Metropolitan region, only 21.1% of the units have more than two of such devices in good condition, and there was significant difference between regions in this regard ($p = 0.03$). The availability of anthropometric scales (150.0 kg) was lowest in the North and South regions, where 35.1% and 33.8%, respectively, did not have any functioning scales. Regarding the 200-kg scales ($p < 0.001$), 46.2% of the health units in the Central region, 49.3% in the Metropolitan region, and 46.9% in the South region did not have this equipment. As to functioning glucometers, between 45.6 and 79.6% of health units had more than two devices available to the population ($p < 0.001$).

In reference the prevention and care of obesity among children, we observed that around 80.0% of the health units in the Central, Metropolitan, and South regions have only one child scale in working order. In the North and Central regions, 8.1% and 7.7% of the health units, respectively, do not have this equipment ($p < 0.001$). Between 8.5% and 10.6% of units in the Central, Metropolitan, and South regions did not have a functioning anthropometric ruler suitable for children ($p = 0.017$).

As to the availability of health records in the units (Table 1), we observed that, in the South region, 59.4% of the health units do not have the teenager's health record book ($p = 0.001$); in the North region, 62.2% of the units do not have health record books for the elderly ($p = 0.001$). The health record books of pregnant women and children were the most available in the health units.

Table 1. Number of professionals, equipment, and materials in UBS for the prevention and care of obesity in the Espírito Santo state regions, PMAQ - 3rd cycle (2017).

Variables	Region					
	North	Central	Metropolitan	South	ES	p-value[a]
Number of professionals in the team (excluding NASF)	**n = 24**	**n = 53**	**n = 79**	**n = 61**	**n = 217**	
Nutritionist						
0	19 (79.2)	30 (56.6)	62 (78.5)	43 (70.5)	154 (71.0)	0.041
1	5 (20.8)	23 (43.4)	17 (21.5)	18 (29.5)	63 (29.0)	
≥ 2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Physical educator						
0	24 (100.0)	50 (94.3)	51 (64.6)	59 (96.7)	184 (84.8)	<0.001
1	0 (0.0)	3 (5.7)	18 (22.8)	2 (3.3)	23 (10.6)	
≥ 2	0 (0.0)	0 (0.0)	10 (12.7)	0 (0.0)	10 (4.6)	
Number of equipment and materials	**n = 74**	**n = 130**	**n = 142**	**n = 160**	**n = 506**	
Functioning pressure measure device with cuff suitable for obese individuals						
0	35 (47.3)	66 (50.8)	59 (41.5)	86 (53.8)	246 (48.6)	0.028
1	27 (36.5)	47 (36.2)	53 (37.3)	63 (39.4)	190 (37.5)	
≥ 2	12 (16.2)	17 (13.1)	30 (21.1)	11 (6.9)	70 (13.8)	
Functioning anthropometric scale (150 kg)						
0	26 (35.1)	36 (27.7)	32 (22.5)	54 (33.8)	148 (29.2)	0.249
1	32 (43.2)	58 (44.6)	65 (45.8)	71 (44.4)	226 (44.7)	
≥ 2	16 (21.6)	36 (27.7)	45 (31.7)	35 (21.9)	132 (26.1)	
Functioning anthropometric scale (200 kg)						
0	25 (33.8)	60 (46.2)	70 (49.3)	75 (46.9)	230 (45.5)	<0.001
1	36 (48.6)	57 (43.8)	31 (21.8)	63 (39.4)	187 (37.0)	
≥ 2	13 (17.6)	13 (10.0)	41 (28.9)	22 (13.8)	89 (17.6)	
Functioning child scale						
0	6 (8.1)	10 (7.7)	3 (2.1)	4 (2.5)	23 (4.5)	<0.001
1	44 (59.5)	101 (77.7)	109 (76.8)	137 (85.6)	391 (77.3)	
≥ 2	24 (32.4)	19 (14.6)	30 (21.1)	19 (11.9)	92 (18.2)	

Table 1. Number of professionals, equipment, and materials in UBS for the prevention and care of obesity in the Espírito Santo state regions, PMAQ - 3rd cycle (2017).(Continues)

Variables		Region					
		North	Central	Metropolitan	South	ES	p-value[a]
Number of equipment and materials							
Functioning anthropometric ruler for adults							
0		5 (6.8)	5 (3.8)	6 (4.2)	3 (1.9)	19 (3.8)	0.270
1		37 (50.0)	80 (61.5)	76 (51.4)	84 (52.5)	274 (54.2)	
≥ 2		32 (43.2)	45 (34.6)	63 (44.4)	73 (45.6)	213 (42.1)	
Functioning anthropometric ruler for children							
0		0 (0.0)	11 (8.5)	12 (8.5)	17 (10.6)	40 (7.9)	0.017
1		51 (68.9)	94 (72.3)	85 (59.9)	109 (68.1)	339 (67.0)	
≥ 2		23 (31.1)	25 (19.2)	45 (31.7)	34 (21.2)	127 (25.1)	
Functioning glucometer							
0		2 (2.7)	1 (0.8)	1 (0.7)	8 (5.0)	12 (2.4)	<0.001
1		37 (50.0)	55 (42.3)	28 (19.7)	79 (49.4)	199 (39.3)	
≥ 2		35 (47.3)	74 (56.9)	113 (79.6)	73 (45.6)	295 (58.3)	
Anthropometric measuring tape in good condition							
0		5 (6.8)	6 (4.6)	12 (8.5)	18 (11.2)	41 (8.1)	0.062
1		22 (29.7)	38 (29.2)	23 (16.2)	35 (21.9)	118 (23.3)	
≥ 2		47 (63.5)	86 (66.2)	107 (75.4)	107 (66.9)	347 (68.6)	
Printed material and supplies for health care		**n = 74**	**n = 130**	**n = 142**	**n = 160**	**n = 506**	
Child Health Record book always available	Sim	48 (64.9)	78 (60.0)	82 (57.7)	85 (53.1)	293 (57.9)	0.361
Pregnant Woman Health Record book always available	Sim	64 (86.5)	129 (99.2)	125 (88.0)	134 (83.8)	452 (89.3)	<0.001
Teenager Health Record book always available	Sim	38 (51.4)	63 (48.5)	89 (63.4)	65 (40.6)	256 (50.6)	0.001
Elderly Health Record book or equivalent always available	Sim	28 (37.8)	76 (58.5)	81 (57.0)	107 (66.9)	292 (57.7)	0.001

[a]Chi-square. Values shown as n (%). National Program for Improving Access and Quality of Primary Care, PMAQ-AB; Basic Health Unit, UBS.

Table 2 shows the health promotion and obesity prevention actions developed in the UBS. Regarding children care, we observed that, in the North region, 6.0% of the teams did not record the growth and development and the nutritional status of this population ($p = 0.02$). In the South region, 8.5% of the professionals reported not recording nutritional status, with a significant difference between regions ($p = 0.004$).

Regarding issues related to the care of the general population, 97.0% of the professionals believe actions aimed at health promotion are developed in the ES state. Nevertheless, 41.7% of the teams in the Central region and 40.7% in the Metropolitan region do not take time to listen to users about the services provided and the health problems of the territory; affirmative answers in this matter were reported in greater proportion by professionals from the South region (71.8%; $p = 0.03$).

Still on actions aimed at health promotion, the use of the Food Guide for the Brazilian Population was lower in the Metropolitan region, where 61.6% of the professionals responded using the document as a basis for carrying out actions ($p < 0.001$). Regarding integrative and complementary practices, only 6.0 and 4.5% of the professionals in the North and Central regions, respectively, reported offering this approach ($p = 0.007$), while in the state as a whole this proportion reaches 9.8%.

Most teams are not aware of the existence of the Healthy Program in their municipalities, with the exception of the Metropolitan region (62.0%; $p < 0.001$). In addition, 74.0% of the professionals could not say if there was a unit of the program in their territory, while in the North and South region the proportion reached 85.5% and 85.2%, respectively ($p < 0.001$). Regarding the Health at School Program, most professionals reported participating in it (84.3%), and of these, 69.7% reported planning actions in schools together with education professionals, particularly so in the metropolitan region (77.7%) ($p = 0.03$).

Table 2. Health promotion and obesity prevention actions developed by health professionals from UBS of the Espírito Santo state regions - PMAQ - 3rd cycle (2017).

Variables	Region					
	North	Central	Metropolitan	South	ES	p-value[a]
Children health records:	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
- Growth and development	78 (94.0)	153 (97.5)	235 (99.2)	179 (94.7)	645 (96.8)	0.024
- Nutritional status	78 (94.0)	154 (98.1)	232 (97.9)	173 (91.5)	637 (95.6)	0.004
Action development:	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
- Promotion of exclusive breastfeeding for children up to 6 months old	80 (96.4)	156 (99.4)	227 (95.8)	183 (96.8)	646 (97.0)	0.226
- Encouraging the introduction of healthy foods and continued breastfeeding from 6 months onwards	80 (96.4)	153 (97.5)	226 (95.4)	179 (94.7)	638 (95.8)	0.613
- Health promotion	79 (95.2)	156 (99.4)	229 (96.6)	182 (96.3)	646 (97.0)	0.222
Health promotion actions:	**n = 76**	**n = 156**	**n = 226**	**n = 181**	**n = 639**	
- Self-care support	74 (97.4)	149 (95.5)	207 (91.6)	175 (96.7)	605 (94.7)	0.071
- Listening to users about the services provided and the health problems of the territory	50 (65.8)	91 (58.3)	134 (59.3)	130 (71.8)	405 (63.4)	0.028
Use of the new "Food Guide for the Brazilian Population"	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	64 (77.1)	114 (72.6)	146 (61.6)	155 (82.0)	479 (71.9)	<0.001
Knowledge of PAS in the municipality	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	31 (37.3)	71 (45.2)	147 (62.0)	85 (45.0)	334 (50.2)	<0.001
Knowledge of a PAS unit in the municipality	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	12 (14.5)	43 (27.4)	90 (38.0)	28 (14.8)	173 (26.0)	<0.001
Development of joint actions with professionals from the PAS unit	**n = 12**	**n = 43**	**n = 90**	**n = 28**	**n = 173**	
	5 (41.7)	24 (55.8)	60 (66.7)	18 (64.3)	107 (61.8)	0.297
Actions developed with PAS professionals:	**n = 5**	**n = 24**	**n = 59**	**n = 18**	**n = 106**	
- Body practices and physical activity	4 (80.0)	19 (79.2)	47 (79.7)	15 (83.3)	85 (80.2)	0.987
- Referral of users to the activities of the PAS unit	3 (60.0)	18 (75.0)	52 (88.1)	17 (94.4)	90 (84.9)	0.111

Table 2. Health promotion and obesity prevention actions developed by health professionals from UBS of the Espírito Santo state regions - PMAQ - 3rd cycle (2017). (Continues)

Variables	Region					
	North	Central	Metropolitan	South	ES	p-value[a]
Participation of the team in the Health at School Program	**n = 50**	**n = 106**	**n = 190**	**n = 164**	**n = 510**	
	42 (84.0)	96 (90.6)	154 (81.1)	138 (84.1)	430 (84.3)	0.198
Joint planning between the team and teachers to develop actions in the school	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	57 (68.7)	122 (77.7)	151 (63.7)	134 (70.9)	464 (69.7)	0.030
Offering Integrative and Complementary Practices	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	5 (6.0)	7 (4.5)	34 (14.3)	19 (10.1)	65 (9.8)	0.007

[a]Chi-square. Values shown as n (%), regarding the affirmative answers of the professionals. National Program for Improving Access and Quality of Primary Care, PMAQ-AB; Basic Health Unit, UBS; Healthy Program, PAS.

Table 3 shows the actions related to obesity care developed in the UBS. Most teams (95.2%) carry out anthropometric assessments of the users. And, after identifying obese individuals, the most performed action is the referral to a specialized service (92.3%), followed by monitoring the user in health units (78.0%). At the NASF, 40.0% and 66.7% of the professionals from the Metropolitan and North regions, respectively, reported developing actions for the care of obesity together with the primary care (PC) teams.

In respect combined actions, the South region presented the lowest proportions in the coordination of care for complex cases (88.9%), development of thematic and/or therapeutic groups aimed at the overweight population (55.6%), and risk stratification of this population (44.4%); however, there was no statistical difference between health regions.

In the North region, 50.0% of NASF professionals reported not carrying out the training of PC professionals and risk stratification of the overweight population. However, all professionals answered that they provide therapeutic assistance to users who underwent a surgical procedure for the treatment of obesity, unlike in the Metropolitan region, where only 50.0% reported doing so.

Table 3. Actions related to obesity care developed by health professionals from UBS in the Espírito Santo state regions, PMAQ - 3rd cycle (2017).

Variables	Region					
	North	Central	Metropolitan	South	ES	p-value[a]
Obesity care - UBS						
Measurement of users' weight and height	**n = 83**	**n = 157**	**n = 237**	**n = 189**	**n = 666**	
	78 (94.0)	149 (94.9)	224 (94.5)	183 (96.8)	634 (95.2)	0.651
After identifying an obese individual, the team takes some action	**n = 78**	**n = 149**	**n = 224**	**n = 183**	**n = 634**	
	76 (97.4)	144 (96.6)	208 (92.9)	181 (98.9)	609 (96.1)	0.015
Actions the team takes: n = 609						
- User follow-up at the UBS	52 (68.4)	105 (72.9)	178 (85.6)	140 (77.3)	475 (78.0)	0.004
- Proposal of actions aimed at physical activity	24 (31.6)	55 (38.2)	102 (49.0)	68 (37.6)	249 (40.9)	0.021
- Proposal of actions aimed at healthy eating	43 (56.6)	92 (63.9)	147 (70.7)	112 (61.9)	394 (64.7)	0.106
- Activation of the Matrix Support team to support the follow-up of this user at the UBS	27 (35.5)	55 (38.2)	85 (40.9)	87 (48.1)	254 (41.7)	0.172
- Referral to specialized service	65 (85.5)	133 (92.4)	193 (92.8)	171 (94.5)	562 (92.3)	0.104
- Proposal of health education groups for those who want to lose weight	23 (30.3)	41 (28.5)	70 (33.7)	53 (29.3)	187 (30.7)	0.713
Obesity care – NASF						
NASF develops actions for the management of obesity together with BC teams	**n = 3**	**n = 4**	**n = 5**	**n = 11**	**n = 23**	
	2 (66.7)	4 (100.0)	2 (40.0)	9 (81.8)	17 (73.9)	0.184
Actions taken:	**n = 2**	**n = 4**	**n = 2**	**n = 9**	**n = 17**	
- Therapeutic assistance to individuals with BMI between 25-40 kg/m^2	2 (100.0)	4 (100.0)	2 (100.0)	9 (100.0)	17 (100.0)	-
- Participation in the coordination of obesity care in complex cases	2 (100.0)	4 (100.0)	2 (100.0)	8 (88.9)	16 (94.1)	0.815
- Development of thematic/therapeutic groups for overweight individuals	2 (100.0)	4 (100.0)	2 (100.0)	5 (55.6)	13 (76.5)	0.199
- Qualification of PC professionals for the care of overweight users	1 (50.0)	4 (100.0)	2 (100.0)	5 (55.6)	12 (70.6)	0.274
- Risk stratification of the overweight population	1 (50.0)	4 (100.0)	2 (100.0)	4 (44.4)	11 (64.7)	0.166
- Therapeutic assistance to users who underwent a surgical procedure to treat obesity	2 (100.0)	3 (75.0)	1 (50.0)	7 (77.8)	13 (76.5)	0.704

[a]Chi-square. Values shown as %, regarding the affirmative answers of the professionals. National Program for Improving Access and Quality of Primary Care, PMAQ-AB; Basic Health Unit, UBS; Family Health Support Center, NASF; Basic Care, PC.

Table 4 presents the role of the NASF in nutritional care (NC) actions. The Central and South regions presented better results, while the Metropolitan region had the worst, with only 20.0% of the NASF teams reporting the development of NC actions together with the PC teams (p = 0.04).

In the North region, 66.7% of NASF professionals claimed to develop NC actions along the PC system and, of these, none claimed to act to guarantee healthy food in the territory, such as agroecological food markets and community kitchen gardens. Still in the North region, all professionals said they promote actions that encourage healthy eating practices according to the Food Guide; however, only 50.0% declared their participation in the other actions mentioned.

In the South region, there was a low percentage of affirmative answers regarding the qualification of PC professionals (44.4%), the conduction of analysis and intervention on the most prevalent nutritional issues in the territory (55.6%), articulation to guarantee healthy food (22.2%), and the promotion of culinary workshops (33.3%).

Table 4. Development of Nutritional Care actions between NASF and PC teams in the Espírito Santo state regions - PMAQ - 3rd cycle (2017).

Variables	Region					
	North	Central	Metropolitan	South	Total	p-value[a]
	n = 3	**n = 4**	**n = 5**	**n = 11**	**n = 23**	
NASF develops nutritional care actions with PC teams	2 (66.7)	4 (100.0)	1 (20.0)	9 (81.8)	16 (69.6)	0.039
Actions taken:	**n = 2**	**n = 4**	**n = 1**	**n = 9**	**n = 16**	
- Qualification of PC professionals in the collection and analysis of consumption markers	1 (50.0)	2 (50.0)	1 (100.0)	4 (44.4)	8 (50.0)	0.774
- Analysis and intervention on the most prevalent nutritional problems in the territory	1 (50.0)	4 (100.0)	1 (100.0)	5 (55.6)	11 (68.8)	0.344
- Use of methods and/or tools with an emphasis on healthy eating practices	1 (50.0)	3 (75.0)	1 (100.0)	9 (100.0)	14 (87.5)	0.206
- Promotion of actions that further healthy eating practices	2 (100.0)	3 (75.0)	1 (100.0)	9 (100.0)	15 (93.8)	0.362
- Promotion and articulation in the territory to guarantee healthy food supply	0 (0.0)	2 (50.0)	1 (100.0)	2 (22.2)	5 (31.2)	0.250
- Promotion of culinary workshops	1 (50.0)	1 (25.0)	1 (100.0)	3 (33.3)	6 (37.5)	0.545
- Qualification of PC professionals for the collection and recording of anthropometric data	1 (50.0)	2 (50.0)	1 (100.0)	8 (88.9)	12 (75.0)	0.353

[a]Chi-square. Values regarding the affirmative answers of the professionals shown in %. National Program for Improving Access and Quality of Primary Care, PMAQ-AB; Basic Health Unit, UBS; Family Health Support Center, NASF; Basic Care, PC.

DISCUSSION

The present study found gaps regarding the conditions for the application of actions aimed at health promotion and prevention and care of obesity, such as lack of physical educators and nutritionists in the teams, absence of pressure measuring devices with cuffs suitable for obese adults and functioning 200-kg anthropometric scales in the units, scant knowledge and development of actions in the PAS unit, poor offer of Integrative and Complementary Practices and actions aimed at physical activity, in addition to limited assembly of health education groups.

When analyzing the regions separately, we observed that the Metropolitan region had the best indicators. This is the most populous region, with 2,277,458 inhabitants out of 4,064,052 of the estimated total population (reference IBGE 2020) and the one that receives more health funding. Regarding the decentralization of resources, 43.1% of the units in the Metropolitan region are managed by the municipalities (Primary Health Care Office (SAPS) / Ministry of Health - reference December/2017 - considering all units). In 2017, the ES state had 882 UBS registered in the National Registry of Health Establishments (CNES), of which 32.6% were present in the Metropolitan region, 25.6% in the South, 23.6% in the Central region, and 18.1% in the North. And of the 895 teams, 40% belonged to the Metropolitan region, against 13.9% from the North. Regarding the 35 NASF teams, 37.1% were present in the South and 14.3% in the Central region (SAPS / Ministry of Health - reference December/2017). Only 55.6% of the population in the Metropolitan region is covered by PC, a figure that reaches 91.5% in the South region (e-Gestor AB, reference December/2017).

With reference to the number of professionals, the UBS teams were formed by 3,372 health professionals, of which doctors, nurses, and other professionals constituted one third each; among the latter, 1.9% were nutritionists (SAPS / Ministry of Health - reference December/2017).

The present work revealed a lack of nutritionists and physical educators in PHC throughout the state. To ensure therapeutic support for obese individuals, the units must offer individualized nutritional care, continuous education of professionals, food and nutrition actions, and physical activity actions, in order to assist individuals in maintaining and/or losing weight, in addition to encouraging the adoption of healthy lifestyles.[6] To achieve such goals, a multidisciplinary team is essential.

A study on the experience of a multiprofessional and interdisciplinary outpatient service carried out in 2019 identified that team work (including a social worker, physician, nurse, pharmacist, physiotherapist, nutritionist, and psychologist) is an important strategy for the care of obese individuals, as it improves adherence to treatment, respects the individuals' singularities, and encourages changes in the habits of individuals and their families.[15] Furthermore, interprofessional work contributes to achieving the integrality principle of the SUS, because it allows more effective health care due to the approximation of professionals and the realities of the community.[16,17]

Considering that healthy eating and physical activity are fundamental points for behavioral change and comprehensive care, nutritionists and physical educators are professionals suited to work in primary care within communities. Their presence, together with other health professionals, expands the view on individuals and territories, thus supporting the promotion of health in the population.[18,19] Therefore, multiprofessional intervention must be ensured, defining specific attributions in PHC in order to address the problem of obesity. The lack of nutritionists and physical educators evidences a

weakness within the care system that often contributes to other professionals assuming roles to the detriment of technical capacity.[20]

The scarcity of equipment that aid in the diagnosis of nutritional status was evidenced across the state, especially among teams from the Central and South regions. As a strategy for the prevention and care of obesity, it is essential to have functioning instruments available, in addition to training health professionals, so that the correct anthropometric assessment is carried out and, consequently, the diagnosis, risk stratification, and monitoring of users.[18] It is also worth mentioning the low availability of health records in the units, especially those that help in the monitoring of teenagers and the elderly in the South and North regions, respectively. As well as anthropometric equipment, health records are important instruments for assessing, classifying the nutritional status, and monitoring individuals.[6]

As a gateway for individuals to the public health system, the PHC must develop actions on the conditioning and social determinants of health, in order to positively impact the population's quality of life. Monitoring the growth, development, and nutritional status of children should be dealt with more attentively by teams in the North and South regions, as the strategy helps to reduce child mortality and prevent diseases, including obesity, in childhood and in other stages of life.[6,21]

It is also crucial to ensure that users are heard regarding the services provided and the health problems of the territory (SUS principle – social participation), a strategy little employed throughout the state, especially in the Central and Metropolitan regions. Raimundo & Cadete highlighted the importance of listening, classifying it as an essential tool to assist the user in a context of care as a comprehensive action. For these authors, through listening, it is possible to build bonds, produce welcoming relationships, and respect both diversity and individuality in the encounter between those who care and those who receive care.[22]

Still on strategies for health promotion and obesity prevention, the health teams – especially those in the Metropolitan region – should use the Food Guide for the Brazilian Population more often. First published in 2006, the guide is an excellent tool to assist in food and nutrition education actions in the SUS and its frequent use contributes to knowledge construction and development of individual and collective activities to encourage healthy eating practices.[23]

The availability of Integrative and Complementary Practices (PICs) in the UBS analyzed throughout the state is also low, especially in the North and Central regions. Scientific evidence demonstrates the benefits of treatments integrating conventional medicine and PICs, since, in addition to promoting health, these practices also consider social, cultural, and emotional factors.[24,25]

The use of PICs reduces the use of medicines and helps in the empowerment, search for self-care, autonomy achievement, participation in treatment strategies, and satisfaction of the users, in addition to reducing the costs to the public health system.[26] In order for it to be incorporated into the health system, it is important to train professionals, to support and promote studies and research that evaluate the use of PICs within the SUS, and to make medicinal plants and manipulated or industrialized phytotherapics available in health units.[25]

Among the public policies to promote health, the Healthy Program is an important strategy to incorporate physical exercises into the population's routine, in addition to being fundamental in the therapeutic plan of overweight individuals.[6] In the present study, greater proximity to the program was

identified only in teams from the Metropolitan region. This finding was expected, since in 2017 there were only 15 Health Gyms in the state, and of these, 67% were in the Metropolitan region (DAB/MS, reference December/2017).

On the other hand, regarding the Health at School Program, there was less adhesion of teams from the Metropolitan region to joint work between UBS professionals and education professionals. This program aims precisely at articulating education and health, seeking to develop actions to promote the health of students and their families, thus functioning as a strategic action for the prevention of obesity.[27] The data on participation in the program in the state show that the school continues to be an important space for promoting healthy practices and lifestyles, and that this importance is recognized by the health teams.

Regarding obesity care, the present study found that more teams from the North, Central, and South regions reported performing specific actions after the identification of obese individuals than teams from the Metropolitan region. However, regarding the actions carried out, health units from the North region stand out with less monitoring of obese users and availability of actions aimed at physical activity. UBS are crucial health care points for the unique care they provide; therefore, it is important to reorganize work processes and health services, considering the demands and needs of users in order to provide comprehensive and continuous care to obese individuals.[13,28] Most UBS in the state refer obese people to specialized services, although most cases of obesity can and should be dealt with in PHC. Such referral, without any attempts at resolution by the PHC, increases the cost for the public health system and saturates the tertiary care branch.

There was little integration between NASF professionals and PC teams in the development of strategies for the adequate management of obesity and NC actions in the state. Interdisciplinary actions, such as the development of therapeutic groups for overweight individuals, qualification of health professionals, and assistance in the stratification of risk groups are essential to address obesity in the PHC. Matrix support enhances the resolution of health demands, since this interaction between different health professionals advances knowledge and allows a better offer of health care.[6, 29]

A document from the Ministry of Health (2014) presented significant results regarding obesity prevention and care actions in PHC, which enables a glimpse beyond the individual and fragmented biomedical model and consider the social determinants of health that interfere in health care. In addition, the strategies presented enable collaborative, interprofessional, and interdisciplinary work, which ensures individuals and their families will be considered in an integrative manner. Successful experiences were identified, such as the formation of support groups, spaces and groups focused on body practice, education in food and nutrition, active health promotion work with schoolchildren, development of community kitchen gardens, among other fundamental actions to confront obesity.

Based on the data reported in the present study, it is undoubtedly necessary to incorporate therapeutic plans and strategies related to the monitoring of obese individuals in the primary care system of ES, with actions aimed at healthy eating and physical activity, interdisciplinary matrix support, and availability of health education groups. We have also identified the need to compose multidisciplinary teams in different regions, incorporate intersectoral actions, and develop shared activities, especially with the Healthy Program, so that PHC can decisively control obesity.[6]

As a limitation of the present study, it is worth mentioning the occurrence of memory bias, in which the information provided by health professionals may be distorted. It is also not possible to certify the quality of the information collected, since the data are of secondary basis. However, this

type of study is fundamental for decision-making in public health, as its results unveil the dynamics of health units and teams and the perceptions that professionals have about actions for the prevention and care of obesity, in addition to enabling the identification of gaps in the system.

These results can help municipal managers and teams to develop specific intra and intersectoral actions for each region of the ES state that contribute to improving the quality of care for overweight users in health services.

CONCLUSION

The health care process for people with obesity in the different regions of ES has important limitations in terms of structure, which strongly impairs the performance of actions carried out in PHC health services. These limitations should be considered by managers when planning specific actions and strategies to improve the quality of care offered to people with obesity in the state."

REFERENCES

1. Dias PC, Henriques P, Anjos LA, Burlandy L. Obesidade e políticas públicas: concepções e estratégias adotadas pelo governo brasileiro. Cad Saúde Pública 2017; 33(7): 1-12. Doi: 10.1590/0102-311X00006016

2. Hruby A, Hu FB. 2015. The Epidemiology of Obesity: A Big Picture. Pharmaco Economics 2015; 33: 673–8. doi:10.1007/s40273-014-0243-x

3. Spelta F, Fratta Pasini AM, Cazzoletti L, Ferrari M. Body weight and mortality in COPD: focus on the obesity paradox. Eat Weight Disord. 2018; 23(1):15-22. doi: 10.1007/s40519-017-0456-z. Epub 2017 Nov 6. PMID: 29110280.

4. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Secretaria de Gestão Estratégica e Participativa. Vigitel Brasil 2018: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico [Internet]. Brasília: Ministério da Saúde, 2019; 297.

5. Almeida LM, Campos KFC, Randow R, Guerra VA. Estratégias e desafios da gestão da atenção primária à saúde no controle e prevenção da obesidade. Revista Eletrônica Gestão e Saúde 2017; 8(1): 114-139.

6. Brasil. Ministério da Saúde. Estratégias para o cuidado da pessoa com doença crônica Obesidade. Cadernos de Atenção Básica, nº38. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Brasília: Ministério da Saúde; 2014.

7. Poças KC, Freitas LRS, Duarte EC. Censo de estrutura da Atenção Primária à Saúde no Brasil (2012): estimativas de coberturas potenciais. Epidemiol Serv Saúde 2017; 26 (2): 275-284. Doi: 10.5123/S1679-49742017000200005

8. Neves RG, Duro SMS, Muñiz J, Castro TRP, Facchini LA, Tomasi E. Estrutura das unidades básicas de saúde para atenção às pessoas com diabetes: Ciclos I e II do Programa Nacional de Melhoria do Acesso e da Qualidade. Cad de Saúde Pública 2018. 34 (4); e00072317. Doi: 10.1590/0102-311X00072317

9. Brasil. Ministério da Saúde. Departamento de Atenção Básica. Secretaria de Políticas de Saúde. Programa Saúde da Família. Rev Saúde Pública [Internet]. 2000; 34(3): 316-9. doi: 10.1590/S0034-89102000000300018

10. Brasil. Ministério da Saúde. Portaria nº. 424, de 19 de março de 2013. Redefine as diretrizes para a organização e do tratamento do sobrepeso e obesidade como linha de cuidado prioritária da Rede de Atenção à Saúde das Pessoas com Doenças Crônicas. Diário Oficial da União 101 2013; Seção 1.

11. Riquieri MRL, Soares GB, Duarte RCL, Lima EFA. Entre dados, passos e relatos: a experiência da coleta de dados do PMAQ no Espírito Santo. Rev. Eletr. Gestão & Saúde 2019; 10(2):246-260. Doi: 10.26512/gs.v10i2.22488

12. Abreu DMX, Pinheiro PC, Queiroz BL, Lopes ÉAS, Machado ATGM, Lima ÂMLD, et al. Análise espacial da qualidade da Atenção Básica em Saúde no Brasil. Saúde debate. 2018; 42(1): 67-80. Doi: 10.1590/0103-11042018S105

13. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Programa nacional de melhoria do acesso e da qualidade da atenção básica (PMAQ) [Internet]. Brasília: Ministério da Saúde; 2011; 44 p. Disponível em: http://www.saude.mt.gov.br/arquivo/3183

14. Secretaria de Estado da Saúde (Espírito Santo). Plano Diretor de Regionalização da Saúde – PDR. Secretaria da Saúde do Espírito Santo; 2011.

15. Lordani CRF, Costa MD, Silva LL, Costa JB, Araújo ACF. Experiência de um serviço ambulatorial multiprofissional e interdisciplinar de obesidade e cirurgia bariátrica. Rev. Bras. Obes. Nutri. Emag. 2019; 13(82): 934-42.

16. Mallmann FH, Toassi R F C. Educação e trabalho interprofissional em saúde no contexto da Atenção Primária no Brasil: análise da produção científica de 2010 a 2017. Saberes Plurais: Educação na Saúde. 2019; 13(1): 70-84.

17. Peduzi M, Agreli HLF, Silva JAM, Souza HS. Trabalho em equipe: uma revisita ao conceito e a seus desdobramentos no trabalho interprofissional. Trab. educ. saúde. 2020; 18 (s1):e0024678.

18. Mais LA, Domene SMA, Barbosa MB, Taddei JAAC. Formação de hábitos alimentares e promoção da saúde e nutrição: o papel do nutricionista nos Núcleos de Apoio à Saúde da Família – NASF. Rev. APS. 2015; 18(2): 248-55.

19. Silva JCA, Silva KS, Neto CM, Silva TCA, Campos AS. Inclusão do educador físico na Atenção Primária à Saúde: Revisão integrativa. SANARE 2018; 17(1): 74-83.

20. Tavares HC, Pereira PA, Parente JS, Ramos JLS, Marques AA, et al. A importância da inserção do nutricionista na unidade básica de saúde: percepção dos profissionais de saúde. Rev. E-ciênc. 2016; 4(1):89-98. Doi: 10.19095/rec.v4i1.154

21. Brasil. Ministério da Saúde. Política Nacional de Promoção da Saúde. Secretaria de Vigilância em Saúde. Secretaria de Atenção à Saúde. Brasília: Ministério da Saúde; 2014.

22. Raimundo JS, Cadete MMM. Escuta qualificada e gestão social entre os profissionais de saúde. Acta paul. enferm. 2012; 25(spe2): 61-7. Doi: 10.1590/S0103-21002012000900010

23. Brasil. Ministério da Saúde. Guia alimentar para a população brasileira. 2a Ed. Brasília: Ministério da Saúde; 2014.

24. Nagai SC, Queiroz MS. Medicina complementar e alternativa na rede básica de serviços de saúde: uma aproximação qualitativa. Ciência & Saúde Coletiva, 2011; 16(3):1793-1800. Doi: 10.1590/S1413-81232011000300015

25. Brasil. Ministério da Saúde. Política Nacional de Práticas Integrativas e Complementares no SUS: Atitude de ampliação de acesso. 2a Ed. Secretaria de Atenção à Saúde. Departamento de Atenção Básica; 2015.

26. Aguiar J, Kanan LA, Masiero AV. Práticas Integrativas e Complementares na atenção básica em saúde: um estudo bibliométrico da produção brasileira. Saúde debate 2019; 43(123): 1205-18. Doi: 10.1590/0103-1104201912318

27. Brasil. Ministério da Saúde. Saúde na Escola. Cadernos de Atenção Básica, nº24. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Brasília: Ministério da Saúde; 2009.

28. Brasil. Ministério da Saúde. Perspectivas e desafios no cuidado às pessoas com obesidade no SUS: Resultados do laboratório de inovação no manejo da obesidade nas redes de atenção à saúde. Organização Pan-Americana da Saúde. Série Técnica Redes Integradas de Atenção à Saúde, v. 10. Brasília: 2014.

29. Brasil. Ministério da Saúde. Núcleo de Apoio à Saúde da Família – Volume 1: Ferramentas para a gestão e para o trabalho cotidiano. Cadernos de Atenção Básica, nº39. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Brasília: Ministério da Saúde; 2014.

Contributors

Reis EC contributed to the conception and design of the study, interpretation of data, and writing of the article. Aprelini CMO contributed to the study design, analysis and interpretation of data, and writing of the article. Jesus TR contributed to data acquisition and analysis and writing of the article. Enríquez-Martinez OG contributed to the writing of the article. Faria CP and Molina MCB contributed to the conception and design of the study, interpretation of data, and writing of the article. All authors contributed to the critical review of the content and final approval. The authors are responsible for all aspects of the study, including ensuring its accuracy and integrity.

Conflict of Interest: The authors declare no conflicts of interest.

Received: December 7 2021
Accepted: July 14 2022