

DOI: https://doi.org/10.36489/saudecoletiva.2021v11i69p7000

Functional characteristics of nutrition operative groups for in municipality of the interior of Minas Gerais

Características funcionales de los grupos operativos de nutrición en una ciudad del interior de Minas Gerais Características funcionais de grupos operativos de nutrição em município do interior de Minas Gerais

ABSTRACT

Objective: To characterize the functional conditions of operative groups for healthy diet and weight loss and to identify the perception of nutritionists about this action. Methods: Groups were observed regarding the characteristics of the environment, didactic resources and anthropometric equipment; and interview with nutritionists regarding the perception of the groups. Results: The 15 groups observed, took place in places with problems of light, ventilation, number of seats, privacy and insufficient educational materials; most had scales and stadiometers. For the 7 respondent nutritionists, the main inadequacies / insufficiency is: lack of privacy, noises, ventilation, educational materials and quantity or conditions of anthropometric equipment. For most, the group is effective in promoting improvements in food, but not for weight loss, with low adherence by users being the main barrier. Conclusion: There is a need for improvements in the functional conditions of the groups, favoring increased adherence and their effectiveness. **DESCRIPTORS:** Primary Health Care; Food and Nutrition Education; Group Processes; Obesity Management.

RESUMEN

Objetivo: Caracterizar las condiciones funcionales de los grupos operativos de alimentación saludable y perdida de peso e identificar la percepción de los nutricionistas sobre esta acción. Métodos: Se realizo la observación de los grupos sobre las características del entorno, recursos didácticos y equipamiento antropométrico; y entrevista con nutricionistas sobre la percepción de grupos. Resultados: Los 15 grupos observados, se desarrollaron en lugares que tenían problemas de luz, ventilación, número de sillas, privacidad e insuficiente material educativo; la mayoría tenia balanzas y estadiómetros. Para Los 7 nutricionistas encuestados, las principales deficiencias / insuficiencias son: falta de privacidad, ruidos en el lugar, ventilación, materiales educativos y cantidad o condiciones de equipos antropométricos. La mayoría consideró el grupo como efectivo para promover mejoras en la alimentación, pero no para la pérdida de peso, siendo la principal barrera la baja adherencia por parte de los usuarios. Conclusión: Existe la necesidad de mejorar las condiciones funcionales de los grupos, favoreciendo una mayor adherencia y su efectividad. **DESCRIPTORES:** Atención Primaria de Salud; Educación Alimentaria y Nutricional; Procesos de Grupo; Manejo de la Obesidad.

RESUMO

Objetivo: Caracterizar as condições funcionais de grupos operativos de alimentação saudável e perda de peso e identificar a percepção dos nutricionistas sobre essa ação. Métodos: Realizou-se observação dos grupos quanto às características do ambiente, recursos didáticos e equipamentos antropométricos; e entrevista com nutricionistas quanto à percepção sobre os grupos. Resultados: Os 15 grupos observados, aconteciam em locais com problemas de luminosidade, ventilação, número de cadeiras, privacidade e insuficiência de materiais educativos; a maioria contava com balanças e estadiômetros. Para os 7 nutricionistas respondentes as principais inadequações/insuficiência são: falta de privacidade, barulhos/ruídos, ventilação, materiais educativos e quantidade ou condições dos equipamentos antropométricos. Para a maioria o grupo é eficaz na promoção de melhorias na alimentação, mas não para a perda de peso, sendo a baixa adesão pelos usuários a principal barreira. Conclusão: Tem-se a necessidade de melhorias nas condições funcionais dos grupos, favorecendo o aumento da adesão e sua eficácia.

DESCRITORES: Atenção Primária à Saúde; Educação Alimentar e Nutricional; Processos Grupais; Manejo da Obesidade.

RECEIVED ON: 03/30/2021 **APPROVED ON:** 05/03/2021



Luana Rodrigues de Sousa

Nutritionist graduated from the Federal University of Juiz de Fora Campus Governador Valadares, acting as School Nutritionist in the city of Novo Oriente de Minas - Minas Gerais.

ORCID: 0000-0003-2087-9684

Sousa, L.R.; Metzker, L.M.J.; Vincha, L.R.R.; Álvares da Silva, C.L.; Functional characteristics of nutrition operative groups for in municipality of the interior of Minas Gerais

Laiane Mendes de Jesus Metzker

Graduated in Nutrition from the Federal University of Juiz de Fora (2020). She currently works as a clinical nutritionist, with outpatient care.

ORCID: 0000-0002-2797-779X

Kellem Regina Rosendo Vincha

Graduated in Nutrition from the Federal University of Paraná. Specialist in Multiprofessional Residency in Family and Community Health at the Federal University of São Carlos. PhD and Master in Sciences from the Graduate Program in Nutrition in Public Health at the University of São Paulo. She has experience in teaching, research and extension and in Food and Nutrition Education and Health Education. She works in the area of Public Health, with an emphasis on the themes: Food and Nutrition Education and Food and Nutrition Security.

ORCID: 0000-0001-5806-0821

Clarice Lima Álvares da Silva

Graduated in Nutrition from the Federal University of Viçosa (2006), Master in Nutrition Science from the Federal University of Viçosa (2008) and Ph.D. in Health Sciences/Collective Health from the René Rachou Research Center (2013). She is currently an adjunct professor at the Department of Nutrition at the Federal University of Juiz de Fora, an advanced campus in Governador Valadares. Coordinator of the Elderly Studies Center (NEPI). She has experience in the field of Nutrition, with an emphasis on Population Nutritional Analysis, working mainly on the following topics: nutritional status, nutritional assessment, nutritional epidemiology, aging and health promotion.

ORCID: 0000-0002-1257-8964

INTRODUCTION

besity is the result of determinants of different natures that involve biological, behavioral, environmental, economic, social and cultural components. Its increase in society has been explained by changes in dietary patterns, such as the progressive and rapid replacement of traditional foods by ultra-processed foods, which negatively impact food quality. ¹

In Brazil, more than half of the population is overweight (55,4%), and the prevalence of obesity in adults increased from 11,8% in 2006 to 20,3% in 2019. ² It is noteworthy that excess weight is among the main risk factors for the growth of Chronic Non-Communicable Diseases, which emerge as a public health problem, as they entail a high cost to the Unified Health System (SUS) and society. ^{1,3,4}

In this context, it is considered essential to develop actions in Primary Health Care (PHC) to reduce and control the determinants of overweight and obesity, 1 reducing demands and expenses in public health with medium and high complexity care, 4 for this it is necessary to create actions and spaces that protect health and promote healthy ways of life.

1 PHC is the preferred gateway for users to enter the SUS who, through the Expanded Centers for Family Health and Primary Care (NASF-AB), have access to multidisciplinary teams and their collective actions aimed at promoting health and preventing grievances, including activities to support the improvement of food quality and weight reduction. ^{5,6}

The realization of groups as collective actions has been encouraged in PHC since they favor communication, the exchange of knowledge and experiences and the strengthening of autonomy in health, components of health promotion, which provide effects on the care of users. For this purpose, professionals recommend the use of the Operative Group (OG) theory, which advocates the establishment of bonds, communication, reflection and the construction of learning. ^{6,7}

It is understood that changes in eating habits are not easy processes and happen in stages that demand knowledge/learning about food and nutrition, internal motivation, external conditions towards the desired change and encouragement from educational actions. ^{5,8} However, the literature shows gaps for the development of these actions, ranging from physical spaces and infras-

tructure, weakness in the professional qualification process to the lack of management support, 9 which can negatively affect the results.

Given the panorama, this study characterized the functional conditions of healthy eating and weight loss operative groups and identified the perception of nutritionists about this action, in a municipality in the interior of Minas Gerais.

METHOD

This descriptive cross-sectional study was carried out within the scope of the PHC in the municipality of Governador Valadares, Minas Gerais, which has a population of 263.901 inhabitants and is considered the ninth most populous city in the state. 10 With 61 Family Health Strategy (FHS) teams, 55 of which are located in urban areas, the city has 11 NASF-AB distributed in its regions, covering 77% of the population.

Healthy eating and weight loss OGs were included in the study, with the inclusion criteria: being carried out in the urban area of the city, being active during the period of data collection and being conducted by a nutritionist from the NASF-AB. All nutritionists were in-

vited to participate in the survey, which included telephone contact to survey the occurrence and schedule of the groups. Based on the availability of the groups' agenda and the availability of nutritionists from August to October 2019, 15 OG of 09 NASF and 22 FHS teams were involved in the study, covering the entire urban territory of the municipality.

Non-participant observation of the OGs was carried out to survey the characteristics of their functional conditions and an interview to identify the perception of nutritionists regarding the action. The observation, through visits, was previously scheduled with the nutritionist and was carried out by a research team composed of three field observers graduating from the nutrition course, who were trained. A structured script containing information about the physical structure and aspects of the environment (location, lighting, ventilation, space, seats, sound, access and privacy of the place) was used; didactic and educational resources (such as the presence of a blackboard, projector, sound box, computer, microphone, dishes and food or replicas, folders, banners and other printed materials, etc.); anthropometric equipment for monitoring the participants (scale, stadiometer, anthropometric measuring tape and their conditions of use) and characteristics of the groups (number of participants, duration and frequency of meetings).

For the interview, an online form was sent to the nutritionists with structured and semi-structured questions for social identification (age and gender), technique (time since graduation, post-graduation, professional training courses, length of experience at NASF-AB and work in other workplaces) and professional perception about carrying out OGs (adequacy of physical structure, didactic and educational resources and anthropometric equipment and effectiveness and barriers of action).

The analysis involved the systematization and grouping of data into themes: physical structure and environ-

mental aspects, didactic and educational resources, anthropometric equipment, nutritionist profile and nutritionists' perception about the performance of OG. These were evaluated in relation to the absolute (n) and relative (%) frequency of occurrence of characteristics and conditions of adequacy/inadequacy identified in the observation and interview with nutritionists.

This study complies with Resolution 466/12 of the National Health Council, 12 was approved by the Ethics and Research with Human Beings Committee of the Federal University of Juiz de Fora (CAAE: 02892318.8.0000.5147, opinion n.° 3.356.151) and received the due consent of the Municipal Health Department. All group participants and nutritionists signed the Informed Consent Form.

RESULTS

The healthy eating and weight loss OGs, coordinated by the NASF-AB nutritionists, were set up in groups of fortnightly meetings lasting 1 hour. The median number of participants in the observation period was 17, ranging from 05 to 22, and in 40.0% (n=6) trainees from the undergraduate course in nutrition were present.

Physical structure and environmental aspects

It was observed that in 80,0% (n=12) of the cases, the groups took place in the ESF unit itself and the others were held in physical spaces of churches close to the unit, all being therefore considered accessible to users.

Regarding the size of the place reserved for group activities, it was found that 66,7% (n=10) met the needs, that is, they were large places to accommodate the number of participants and allowed the execution of dynamics and methodologies active and expressive. On the other hand, in 33,3% (n=5) of the spaces, the performance of other activities was observed simultaneously, while in 13,3% (n=2) there was interfe-

rence from noise and noise at the time of the action.

In 20% (n=3) of the places the luminosity was considered inadequate, since even with the presence of natural light, they were still dark for reading and viewing materials. In 53,3% (n=8) of the spaces, ventilation was natural and the environment was considered excessively hot, 40% (n=6) had fans and 6.7% (n=1) had air conditioning. All places had chairs or bench seats, but in 20.0% (n=3) these were not enough to meet the number of participants.

Didactic and educational resources

In the groups observed, 40% (n=6) of the nutritionists did not have educational material resources to carry out the action, 20% (n=3) worked with personal computers (laptops), 13,3% (n=2) used a folder printed in black and white on A4 paper, 6,7% (n=1) used posters and also 6,7% (n=1) worked with printed food figures.

Despite the absence of didactic and educational resources in the activities of the day observed, in 13,3% (n=2) of the groups, the professional informed the availability of a multimedia projector; and in 6,7% (n=1) that there was the availability of various materials such as food traffic lights, food bingo, sugar quantity demonstration kit and natural seasoning demonstration kit.

Anthropometric equipment

In the groups observed, 93,3% (n=14) had anthropometric scales, with 85,7% of them (n=12) installed in spaces different from those where the OG was carried out. Still, 7,1% (n=1) was uncalibrated. It was found that 80,0% (n=12) of the professionals had a stadiometer, with 66,7% (n=8) installed in other locations. In 46,6% (n=7) of the groups, the presence of an anthropometric measuring tape was verified.

Nutritionist Profile

Seven nutritionists answered the online form, corresponding to 63,6% of the nutritionists working in the city's NASF-AB. The professionals had a median age of 31 years (minimum 25 and maximum 50 years) and were all female.

The median length of professional

experience at the NASF-AB was 5 years (minimum 1,3 and maximum 5 years), 42,9% (n=3) reported also working in other activities, such as clinics and private practices. Among the activities de-

veloped at the NASF-AB, respondents reported coordinating a median of 4 OG of healthy eating and weight loss (minimum 1 and maximum 6 groups), every two weeks in most cases (71,4%, n=5), followed by monthly (14,3%, n=1) and weekly (14,3%, n=1).

These professionals had a median time of professional training equal to 5 years (minimum 1 and maximum 9 years) and 57,2% (n=4) attended, or were attending, postgraduate studies, with only 1 (14,3%) having a course in the area of expertise. Participation in professional training courses for working with OG was reported by 85,8% (n=6) of respondents, with 66,7% (n=4) of these courses being offered by the service itself and 50% (n=3) with certification.

Nutritionists' perception of operative groups

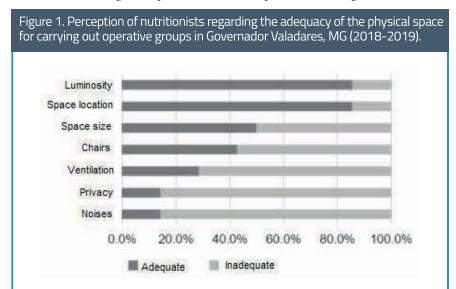
The perception of nutritionists about the adequacy of physical spaces for the activities of the OG is described in Figure 1.

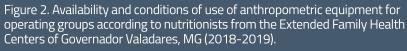
According to the majority of nutritionists, 85,7% (n=6), there is no availability in the health service of didactic and educational resources for carrying out activities in the OG. As for the availability of anthropometric equipment and its condition of use, most reported having a scale, stadiometer and anthropometric measuring tape, with good or bad conditions of use, Figure 2.

Regarding the perception of nutritionists about the effectiveness of OG, 57,1% (n=4) reported that the action results in an improvement in the quality of the participants' food, while 42,9% (3 =) that the group is effective for weight loss. Most of them (85,7%, n=6) showed good satisfaction with the OG they coordinate, followed by reasonable satisfaction (14,3%, n=1). The main difficulties mentioned for the execution of OGs are related to users, as shown in Figure 3.

DISCUSSION

Working with groups is an important





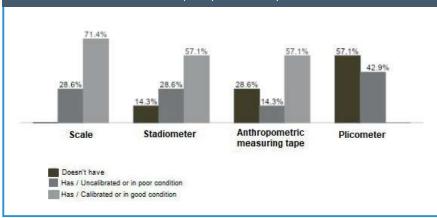


Figure 3. Difficulties perceived in carrying out operative groups by nutritionists from the Extended Family Health Centers of Governador Valadares, MG (2018–2019)

Little appropriation of the methodology by the nutritionist
Difficulty in evaluating the group by users

Low user adherence

100.0

resource present in PHC, which brings health professionals closer to users and enables a broader view of the ways of living and living together. On the other hand, the use of OG assumptions has been shown to enhance this view in terms of interpersonal relationships and eating practices. 7 The variety of characteristics of the analyzed groups is highlighted, which is in line with a study that points out the autonomy of work of nutritionists regarding the organization of groups, with the experience and knowledge of the professional, who may be close or distant from the perception of health promotion. 11 This shows the importance of the continued qualification of the professional, so that groups can reach their benefits and objectives, which is reinforced by the National Health Promotion Policy. 13

The nutritionists who coordinate the OGs are women, mostly young and with 5 years of training and experience in the NASF-AB. Although only one professional has attended a postgraduate course in the field of collective health, the vast majority reported taking part in professional training courses for working with groups. It is known that the effectiveness of the process depends on training and professional intention for its execution, 7,11 the service itself must be structured to provide continuity of training, since continuing health education modifies the organization of work and professional practices, making the environment critical, reflective and competent. 14

The results of the observations of the characteristics of the physical spaces used for the OG were similar to those perceived by nutritionists, thus showing points that make it difficult to carry out the action, such as privacy, noise and noise, ventilation and size of the space. The inadequacy or absence of structural elements such as physical space and didactic and educational materials, also verified in the study by Sá et al. (2021), ¹⁵ they may reflect the low adherence of users, an item reported by nutritionists as the main barrier to action.

This inadequacy implies difficulties for the professional to promote reception, communication, dialogue, exchange of knowledge and experiences and construction of knowledge among everyone in the group, elements recommended by public policies to carry out educational actions ^{13,16} thus, it may limit the results of professional performance.

In the present study, 85,7% of nutritionists considered the availability of teaching and educational resources inadequate. In fact, it was observed that 40% of the OGs did not use any resources, and the topics were addressed in the form of a lecture. Studies show that PHC professionals recognize the importance of educational actions aimed at the community, but prioritize pedagogical methodologies for vertical and authoritative transmission of information, a process that is not very representative of community knowledge and practices. 9,11,17 França and Carvalho, 18 in a systematic review with the theme of food and nutrition education and intervention practices in adults in PHC, it showed that several forms of intervention are used in the same group, with a predominance of the use of lectures. According to the authors, nutritionists consider that lectures are not the best method of working in groups, however, these professionals point out that the daily work, the unavailability of other resources and the practicality of lectures are reasons for choosing this work methodology; elements that can justify the findings of this study.

Another relevant observation in the OGs was the availability of anthropometric equipment. Most groups had scales and stadiometers, while less than half had an anthropometric measuring tape. Part of this equipment was not for the exclusive use of the professional and was available in a different location from where the groups were held. It is conceived that anthropometric data are a parameter that allow the monitoring of the participants and the evolution of their nutritional status throughout their

participation in the OGs, evaluating the results and generating subsidies for the planning of activities. Studies ^{5,19,20} that assess the effectiveness of groups in nutrition, point to anthropometry as the main tool for detecting changes in eating habits, thus showing the importance of maintaining this availability for the professional's action.

Among the barriers described by nutritionists for the proper development of OG, low adherence and devaluation of the activity by users stood out. Discontinuation of users in group activities is a challenge also described by Padilha et al.,5 who carried out a longitudinal study with overweight and obese individuals participating in a group and demonstrated a 23% adherence at the end of the study. This situation may be related to the user and the phase of behavior change in which he finds himself, 19 but it also reinforces the need for an adequate structure and professional training. On the other hand, most nutritionists demonstrated good satisfaction with the performance of OG, a fundamental aspect for proper development, since the professional's desire to teach and learn is also responsible for the users' appreciation and desire to participate and remain in the groups. 7

The study carried out, presented as a methodological limitation the impossibility of observing all the OGs carried out in the city, as well as the field observation carried out in a single meeting of each group, which may have limited the vision of reality. On the other hand, the results found in the observations were compatible with those described by the nutritionists, demonstrating the validity of the findings presented. Furthermore, it is noteworthy that few studies describe OGs from this observational-analytical perspective, and this work is innovative, which offers important results for planning and training policies to work with healthy eating and weight loss groups, as Bortolini et al. 21 reveals that collective actions are, in most cases, the only space of care for users with obesity in PHC.

Sousa, L.R.; Metzker, L.M.J.; Vincha, L.R.R.; Álvares da Silva, C.L.; Functional characteristics of nutrition operative groups for in municipality of the interior of Minas Gerais

CONCLUSION

The OG for healthy eating and weight loss is an intervention present in the municipality's PHC, but it needs to be structured, providing adequate physical conditions for their meetings and didac-

tic and educational resources that favor communication, exchange of knowledge and experiences and strengthening the autonomy of the participants, which can increase adherence and, consequently, the results of improved nutrition and weight loss. The importance of continuing education of nutritionists in relation to the methodological and practical bases for the actions is reinforced, creating subsidies so that the groups become more and more a space for health promotion.

REFERENCES

- 1. Rauber F, Jaime PC. Políticas Públicas de Alimentação e Nutrição voltadas ao sobrepeso e obesidade. In: Jaime PC, editor. Políticas públicas de alimentação e nutrição. Rio de Janeiro: Atheneu, 2019. p. 123-132.
- 2. Brasil. Vigitel Brasil 2019 vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico: estimativas sobre frequência e distribuição sociodemográfica de fatores de risco e proteção para doenças crônicas nas capitais dos 26 estados brasileiros e no Distrito Federal em 2019. Ministério da Saúde, Secretaria de Vigilância em Saúde, Departamento de Análise em Saúde e Vigilância de Doenças não Transmissíveis. Brasília: Ministério da Saúde, 2020.
- 3. Cruz MF, Ramires VV, Wendt A, Mielke Gl, Martines-Mesa J, Wehmeister FC. Simultaneidade de fatores de risco para doenças crônicas não transmissíveis entre idosos da zona urbana de Pelotas. Cad. Saúde Pública. 2017;33 (2):1-11.
- 4. Almeida LM, Campos KFC, Randow R, Guerra VA. Estratégias e desafios da gestão da atenção primária a saúde no controle e prevenção da obesidade. Revista Eletrônica Gestão e Saúde. 2017; 8 (1):114-39.
- 5. Padilha VS, Vaz, MS, Lagares EB, Anastácio RL. Efeito da participação em grupos operativos para redução de peso em conhecimentos e parâmetros nutricionais. Revista Brasileira de Obesidade, Nutrição e Emagrecimento. 2016;10 (59): 250-59.
- 6. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Núcleo de Apoio à Saúde da Família. Brasília: Ministério da Saúde, 2014.
- 7. Vincha KRV, Santiago DA, Campos EAL, Pellegrinelli MLP. Prática Educativa em Grupo: Respondendo a Inquietações. In: Diez-Garcia RW, Cervato-Mancuso AM, editores Mudanças alimentares e educação alimentar e nutricional. 2. ed. Rio de Janeiro: Guanabara Koogan, 2017. p.318-26.
- 8. Diez-Garcia RW. Mudanças alimentares e educação alimentar e nutricional. In: Diez-Garcia RW, Cervato-Mancuso AM, editores. Mudanças alimentares e educação alimentar e nutricional. 2. ed. Rio de Janeiro: Guanabara Koogan, 2017. p.3–16.
- 9. Vasconcelos ACCP de, Magalhães R. Práticas educativas em Segurança Alimentar e Nutricional: reflexões a partir da experiência da Estratégia Saúde da Família em João Pessoa, PB, Brasil. Interface (Botucatu). 2016;20(56):99-110.
- 10. Instituto Brasileiro de Geografia e Estatística (IBGE). Cidades: Governador Valadares, Minas Gerais. 2010. [acesso em 05 de jun 2018] Disponível em: https://cidades.ibge.gov.br/brasil/mg/governador-valadares/panorama.

- 11. Vincha KRR, Cárdenas AP, Cervato-Mancuso AM, Vieira VL. Grupos de educação nutricional em dois contextos da América Latina: São Paulo e Bogotá. Interface (Botucatu). 2014;18(50):507-520.
- 12. Brasil. Resolução nº 466, de 12 de dezembro de 2012. Dispõe sobre diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Diário Oficial [da] República Federativa do Brasil, Brasília, DF, 13 jun.
- 13. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Secretaria de Atenção à Saúde. Política Nacional de Promoção da Saúde. Brasília: Ministério da Saúde; 2014.
- 14. Ricardi LM, Sousa MF. Educação permanente em alimentação e nutrição na Estratégia Saúde da Família: encontros e desencontros em municípios brasileiros de grande porte. Ciência & Saúde Coletiva. 2015;20(1):208-18.
- 15. Sá SCM, Santos EAC, Brito da Silva N, Chaves BSC, Lira SCS. Desafios e potencialidade da atuação da equipe multiprofissional na atenção primária em saúde. Saúde Coletiva. 2021;(11) 61:4918-4923.
- 16. Brasil. Ministério do Desenvolvimento e Combate à Fome. Secretaria Nacional de Segurança Alimentar e Nutricional. Marco de referência de educação alimentar e nutricional para as políticas públicas. Brasília: Ministério do Desenvolvimento e Combate à Fome; 2012.
- 17. Spina N, Martins PA, Vedovato GM, Laporte ASC, Zangirolani LTO, Medeiros MAT. Nutricionistas na atenção primária no município de Santos: atuação e gestão da atenção nutricional. Demetra. 2018;13(1):117-34.
- 18. França JC, Carvalho VCHS. Estratégias de educação alimentar e nutricional na Atenção Primária à Saúde: uma revisão de literatura. Saúde Debate. 2017;41(114): 932:48.
- 19. Moreira P, Romualdo MCS, Amparo FC, Paiva C, Alves R, Magnoni D, et al. A Educação nutricional em grupo e sua efetividade no tratamento de pacientes obesos. Revista Brasileira de Obesidade, Nutrição e Emagrecimento. 2012;6(35):216-24.
- 20. Torres HC, Franco LJ, Stradioto MA, Hortale VA, Schall VT. Avaliação estratégica de educação em grupo e individual no programa educativo em diabetes. Rev Saúde Pública. 2008;43(2):291-92.
- 21. Bortolini GA, Oliveira TFV de, Silva SA da, Santin R da C, Medeiros OL de, Spaniol AM, et al. Ações de alimentação e nutrição na atenção primária à saúde no Brasil. Rev Panam Salud Publica. 2020;44:1-8.