GUIDELINES TO HEALTHY EATING AND ASSOCIATED FACTORS AMONG USERS OF PRIMARY HEALTH CARE IN SOUTHERN BRAZIL

Orientação para alimentação saudável e fatores associados entre usuários da atenção primária à saúde no sul do brasil

Orientación para alimentación saludable y factores asociados entre usuarios de la atención primaria de salud del sur de Brasil

Original Article

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ABSTRACT

Objective: To describe the prevalence of guidelines to healthy eating, differences between health care models and associated factors among users of primary health care. **Methods:** Cross-sectional study conducted with 1,246 adults and older people in Pelotas, Rio Grande do Sul. Data were collected between May and October 2013 through a questionnaire to assess sociodemographic data, self-reported chronic disease, self-perception of health and nutrition, nutritional status, health care model used, and guidelines to healthy eating. The association between the independent variables and the guidelines to healthy eating was verified using Prevalence Ratio by comparing exposed and unexposed individuals according to the frequency of guidelines. **Results:** The prevalence of guidelines to healthy eating was 42% (CI95 39.2-44.7) and women (PR 1.51; CI95 1.26-1.83), older people (PR 1.39; CI95 1.20-1.62), those with more chronic diseases (PR 1.62; CI95 1.36-1.93), those with a negative self-perception of nutrition (PR 1.32; CI95 1.14-1.52) and those treated within the Family Health Strategy (PR 1.15; 1.02-1.30) were more likely to be exposed to the guidelines. The probability of guidelines to healthy eating was lower among those with white skin color (PR 0.85; CI95 0.74-0.97) and secondary and higher education or more (PR 0.88 and 0.83 respectively, p=0.037 linear trend test). **Conclusion:** In primary care, the guidelines to healthy eating are not universal and there is iniquity, highlighting the need for further efforts to increase its offer. Greater attention should be given to men, younger individuals, people with white skin color and those diagnosed with chronic diseases.

Descriptors: Health Evaluation; Primary Health Care; Food and Nutrition Education; Nutrition, Public Health; Health Promotion.

RESUMO

Objetivo: *Descrever a prevalência de orientação para alimentação saudável, diferenças entre modelo assistencial e fatores associados entre usuários da atenção primária de saúde.* **Métodos:** *Estudo transversal, realizado com 1.246 adultos e idosos, em Pelotas, Rio Grande do Sul. Os dados foram coletados entre maio e outubro de 2013, por meio da aplicação de questionário investigando dados socioeconômicos, doenças crônicas autorreferidas, autopercepção da saúde e da alimentação, estado nutricional, modelo assistencial em que é atendido e orientação para alimentação saudável. A associação entre as variáveis independentes e a orientação para alimentação saudável foi verificada por meio da Razão de Prevalências, comparando-se expostos e não expostos quanto à frequência da orientação.* ***Resultados:*** *A prevalência da orientação para alimentação saudável foi de 42% (IC95 39,2-44,7) e apresentaram maior probabilidade: mulheres (RP=1,51; IC95 1,26-1,83), idosos (RP=1,39; IC95 1,20-1,62), aqueles com maior número de doenças crônicas (RP=1,62; IC95 1,36-1,93), que autoperceberam sua alimentação como negativa (RP=1,32; IC95 1,14-1,52) e atendidos pela Estratégia de Saúde da Família (RP=1,15; 1,02-1,30). A probabilidade da orientação para alimentação saudável mostrou-se menor entre os com cor da pele branca (RP=0,85; IC95 0,74-0,97) e ensino médio e superior ou mais (RP=0,88 e 0,83 respectivamente, p teste tendência linear = 0,037).* **Conclusão:** *Na atenção primária, a orientação para alimentação saudável não é universal e há iniquidade, deixando clara a necessidade de maiores esforços no sentido de ampliar a oferta. Maior atenção deve ser*

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dada aos homens, aos indivíduos mais jovens, aos com cor da pele branca e àqueles sem diagnóstico de doenças crônicas.

Descritores: *Avaliação em Saúde; Atenção Primária à Saúde; Educação Alimentar e Nutricional; Nutrição em Saúde Pública; Promoção da Saúde.*

RESUMEN

Objetivo: *Describir la prevalencia de orientación para alimentación saludable, las diferencias entre el modelo de asistencia y los factores asociados entre los usuarios de la atención primaria de salud.* **Métodos:** *Estudio transversal realizado con 1.246 adultos y mayores de Pelotas, Rio Grande do Sul. Los datos fueron recogidos entre mayo y octubre de 2013 a través de la aplicación de un cuestionario sobre los datos socioeconómicos, las enfermedades crónicas auto referidas, la auto percepción de la salud y la alimentación, el estado nutricional, el modelo de asistencia y la orientación para alimentación saludable. La asociación entre las variables independientes y la orientación para alimentación saludable fue verificada a través de la Razón de Prevalencias comparándose los expuestos y no expuestos cuanto a la frecuencia de la orientación.* **Resultados:** *La prevalencia de orientación para alimentación saludable fue del 42% (IC95 39,2-44,7) y presentaron mayor probabilidad las mujeres (RP=1,51; IC95 1,26-1,83), los mayores (RP=1,39; IC95 1,20-1,62), aquellos con más enfermedades crónicas (RP=1,62; IC95 1,36-1,93), los que auto percibieron su alimentación como negativa (RP=1,32; IC95 1,14-1,52) y los asistidos por la Estrategia de Salud de la Familia (RP=1,15; 1,02-1,30). La probabilidad de la orientación para alimentación saludable se mostró menor entre los que tenían el color de piel blanco (RP=0,85; IC95 0,74-0,97) y educación secundaria y superior o más (RP=0,88 e 0,83 respectivamente, p prueba tendencia linear = 0,037).* **Conclusión:** *La orientación para alimentación saludable en la atención primaria no es universal y hay iniquidad lo que muestra la necesidad de más esfuerzos para la ampliación de la oferta. Más atención se debe ser dar a los hombres, a los individuos más jóvenes, a los de color de piel blanco y aquellos sin diagnóstico de enfermedades crónicas.*

Descriptores: *Evaluación en Salud; Atención Primaria de Salud; Educación Alimentaria y Nutricional; Nutrición en Salud Pública; Promoción de la Salud.*

INTRODUCTION

There is scientific evidence that points to the key role of healthy eating in health promotion, prevention of many diseases and non-pharmacological treatment[1-3]. In Brazil, dietary guidelines have been integrated into Brazil's National Health System, also known as the Unified Health System (*Sistema Único de Saúde – SUS*)[4], pointing out, decisively, the responsibility of the Ministry of Health (MOH) towards dietary and nutrition conditions of the Brazilian population.

Changes in the dietary and nutritional profile of the population and their impact on morbidity and mortality have reverberated in public health policies. Given that, the promotion of healthy eating has been highlighted, reiterating that it is up to health professionals, especially those working in primary care, to educate the population towards the adoption of healthy eating habits[5-7].

In order to consolidate a new logic of its service, the MOH adopted the Family Health Strategy (*Estratégia de Saúde da Família – ESF*) as a way to reorient the health care model through the inclusion of multidisciplinary teams into Prymary Health Centers (*Unidades Básicas de Saúde – UBS*)[8,9] in order to reorganize the practice[10] and prioritize the first level of care[9] with emphasis on disease prevention and health education[11].

The minimum multidisciplinary teams of the ESF are composed of physicians, nurses, nursing assistants or technicians, and community health agents[12]. In order to support and strengthen the integration of the ESF, and aiming to expand and qualify primary care actions, the Family Health Support Centers (*Núcleos de Apoio à Saúde da Família – NASF*) were created[10]; they are health teams consisting of health professionals from different areas of knowledge working together with the minimum teams, sharing and supporting health practices in the territories under their responsibility. The professionals within the NASF are defined by municipal managers and ESF teams based on priority criteria identified according to the local needs[13].

In an ideal scenario, actions for the promotion of healthy eating, guidelines and specific nutritional therapies according to the diagnoses should be performed by a nutritionist, who is the professional qualified for that purpose. Regarding the ESF, the nutritionist can work in the NASF, contributing to the training and strengthening of actions aimed at healthy eating in primary care[10].

In recent years, different aspects of primary health care in Brazil have been deeply studied, with studies addressing both the development of programs targeted to specific groups and performance differences in terms of traditional care model and the ESF[14,15].

However, little is known about the use of guidelines at this point of the care network, as well as the effect of the ESF on them. In general, the frequency and factors associated with guidelines are not yet sufficiently clarified, and the few studies conducted have found that this action is still incipient. Only one third of the adult population living in 100 Brazilian cities received guidelines on the intake of salt, sugar or fat[16]. Among the users of a UBS in a large city, less than half received guidelines to healthy eating[17]. The factors associated with having received guidelines include the female gender, advanced age, white skin color, higher income[16] and the diagnosis of noncommunicable diseases (NCDs)[16,17].

Thus, given the importance of providing users of SUS with guidelines to healthy and adequate eating, as well as the role of the ESF in this process and the lack of studies that have specifically addressed this context, the aim of the present study was to describe the prevalence of guidelines to healthy eating, differences between health care models and associated factors among users of primary health care.

METHODS

This is a cross-sectional study conducted between May and October 2013 in the city of Pelotas, Rio Grande do Sul. The city, according to the 2010 demographic census had an estimated population of 328,275 inhabitants and a Human Development Index (HDI) of 0.739[18]. In 2013, the primary care network had 36 UBS in urban areas, 14 of which had implemented the ESF, indicating a 38.9% coverage; however, the city had no NASF teams.

Users of all urban UBS aged over 20 years old, regardless of gender, were eligible; the sudy excluded pregnant and/or lacating women and people wih physical or mental disorders because of the differentiated diet and nutritional assessment or the difficulty in answering the questionnaire.

The sample size was determined considering all the independent variables included in the study, relative risk of 2.0, 95% confidence level, 80% power, up to 1:9 ratio between unexposed and exposed individuals and expected outcome prevalence in unexposed individuals of at least 13%. It would take 936 respondents plus 10% for possible losses and 25% for confounders, totaling 1,264. All the UBS in the city were included following a two-stage sampling. The first stage consisted in proportional random sampling, and the average number of procedures performed in each UBS in the month before data collection served as a criterion for defining the number of users to be interviewed in each UBS. The second stage consisted in convenience sampling and in each UBS the two interviewers interviewed consecutively the users attending the consultations. If the number set for a certain UBS was not reached, the interviewers returned the next day and so on until they reached the stipulated number without the repetition of users.

The outcome was assessed through the following question: "*Have you ever received, during a consultation, any guidelines to healthy eating from a doctor or any other healthcare professional?*". Individuals who answered yes were asked about the place of consultation and the participants who received guidelines in the UBS were considered as having a positive outcome.

The independent variables were gender, age (measured in years and categorized into 20-39, 40-59 and 60 or older), self-reported skin color (white, black and others), marital status (with spouse, without spouse), quintiles of household income per capita (with the 1º as the least economically favored one), education (Primary Education, Secondary Education and Higher Education or more), occupation (employed, unemployed), number of self-reported noncommunicable diseases (NCDs) (reporting medical diagnosis of obesity, diabetes, hypertension, hypercholesterolemia, hypertriglyceridemia or heart disease, categorized into none, 1-2 and 3 or more), self-perception of health dietary intake (positive, negative), care model implemented in the UBS where the user is treated (traditional, Family Health Strategy) and nutritional status. Nutritional status was assessed through self-reported weight and height and classified according to the Body Mass Index[5]. For analysis purposes, the nutritional status was classified into normal weight or overweight.

Interviews using a pre-coded and tested questionnaire were carried out by 12 trained interviewers who went to the reception of the UBS in pairs seeking the eligible subjects for the study and inviting the to answer the questionnaire after giving their free informed consent. In case of refusals, two new attempts were made by another interviewer and the field supervisor; there was no replacement of losses. Data were collected from Monday to Friday in the morning and in the afternoon shifts in the waiting room before the consultations until number set for each unit was reached. Of all the interviews, 10% were carried out one more time for quality control.

Data were double entered in EpiData 3.1 software; the statistical analysis was performed using Stata version 11 comprising the description of the sample and the determination of the outcome prevalence and its 95% confidence interval (95CI). After that, bivariate analysis was performed to verify the associations between the outcome and risk factors, determining the crude Prevalence Ratios (PR) and their 95CI.

Then, multivariate analysis was performed using Poisson regression with robust variance and considering the cluster sampling option in Stata (robust). The backward stepwise analysys followed a pre-established hierarchical model[19], which comprised three levels of determination, with adjusted RP and their 95CI. The most distal level included demographic and socioeconomic variables (gender, age, skin color, marital status, income, education and occupation); the second analysis included the variables related to health and dietary intake (number of self-reported NCDs, self-perceived health, nutritional status and self-perception of dietary intake); and third included the care model. All variables of each level were adjusted to each other and to the variables of the subsequent level. Those variables with p values less than or equal to 0.20 were maintained for adjustment for the next level in order to

avoid the possibility of negative confounding. In the case of polytomous categorical variables that presented an order among them, the Wald test was used to test for linear trend; and when there was no evident order, the heterogeneity test was applied. In all significance tests, the two-tailed p-value was set at <0.05.

The Health Research Ethics Committee of the institution approved the study protocol under Opinion No. 228.401 in compliance with Resolution No. 466/12 of the National Health Council and the ethical principles in the Declaration of Helsinki.

RESULTS

Of the 1,264 enrolled users, 1,246 answered the questionnaire, totaling 1.4% of losses (n=18). Most were women (83.7%, n=1,043), adults (77.8%, n=969), had white skin color (63.3%, n=787), spouse (60.2 %, n=750),

Table I - Characterization of users of the urban Primary Health Care network. Pelotas, Rio Grande do Sul, 2013. (n=1,246).

Variables	n	%
Demographic		
Gender		
Male	203	16.3
Female	1,043	83.7
Age in years		
20-39	471	37.8
40-59	498	40.0
60 or older	277	22.2
Skin color*		
Black and others	457	36.7
White	787	63.3
Marital status		
Without spouse	496	39.8
With spouse	750	60.2
Socioeconomic		
Quintiles of monthly household income per capita	Média	DP
1st	142.9	71.7
2nd	289.5	37.9
3rd	416.8	51.8
4th	629.1	67.1
5th	1,034.8	304.8
Education		
Primary	832	66.8
Secondary	276	22.1
Higher education or more	138	11.1
Occupation		
Employed	396	31.8
Unemployed	850	68.2
Health and dietary conditions		
Number of self-reported noncommunicable diseases		
None	576	46.2
1-2	486	39.0
3 or more	184	14.8
Self-perceived health		
Positive	728	58.4
Negative	518	41.6
Nutritional status**		
Normal weight	434	39.0
Overweight	679	61.0
Self-perceived dietary intake		
Positive	787	63.2
Negative	459	36.8
Care model		
Traditional	577	46.3
Family Health Strategy	669	53.7

* 2 losses; ** 133 losses.

complete primary education (66.8%, n=832), and were unemployed (68.2%, n=850). The income per capita ranged from R$ 0.0 to R$ 3,333.3 (mean 496.9 ± SD 344.1) (Table I).

Regarding health and dietary intake conditions, most participants reported medical diagnosis of one or more NCDs (53.8%, n=670) and had a positive self-perception of health (58.4%, n=728) and dietary intake (63.2%, n=787); the majority was overweight (61%, n=679). As for the care model, 53.7% (n=669) were users of the ESF. (Table I).

Of the respondents, 42% (n=523; 95CI 39.2-44.7) reported receiving guidelines to healthy eating. When the independent variables were adjusted following the pre-established hierarchical model in the first level, the female gender remained associated with the outcome. Women had a chance of receiving guidelines 51% higher than men (PR=1.51; 95 CI 1.26-1.83). (Table II).

Table II - Crude and adjusted analysis of factors associated with guidelines to healthy eating reported by users of the urban Primary Health Care network. Pelotas, Rio Grande do Sul, 2013. (n=1,246).

Variables	Crude		Adjusted	
	PR (95CI)	p value	PR (95CI)	p value
1st level*				
Demographic				
Gender		<0.001[a]		<0.001[a]
Female	1.42 (1.18-1.71)		1.51 (1.26-1.83)	
Age in years		<0.001[b]		<0.001[b]
40-59	1.31 (1.17-1.48)		1.33 (1.17-1.51)	
60 or older	1.36 (1.18-1.56)		1.39 (1.20-1.62)	
Skin color		0.098[a]		0.016[a]
White	0.89 (0.78-1.02)		0.85 (0.74-0.97)	
Marital status		0.234[a]		0.948[a]
With spouse	0.94 (0.85-1.04)		1.00 (0.89-1.12)	
Socioeconomic				
Quintiles of monthly household income per capita		0.068[c]		0.092[c]
2nd	1.09 (0.93-1.27)		1.08 (0.93-1.26)	
3rd	0.90 (0.72-1.11)		0.91 (0.74-1.11)	
4th	1.04 (0.88-1.23)		1.02 (0.85-1.22)	
5th	1.05 (0.91-1.21)		1.09 (0.93-1.26)	
Education		0.002[b]		0.037[b]
Secondary	0.83 (0.72-0.96)		0.88 (0.76-1.02)	
Higher education or more	0.81 (0.68-0.97)		0.83 (0.68-1.03)	
Occupation		0.047[a]		0.498[a]
Unemployed	1.15 (1.00-1.32)		1.05 (0.91-1.22)	
2nd level**				
Health and dietary conditions				
Number of self-reported NCDs		<0.001[b]		<0.001[b]
1-2	1.51 (1.30-1.75)		1.40 (1.19-1.64)	
3 or more	1.94 (1.63-2.30)		1.62 (1.36-1.93)	
Self-perceived health		<0.001[a]		0.531[a]
Negative	1.33 (1.15-1.53)		1.05 (0.89-1.24)	
Nutritional status		<0.001[a]		0.057[a]
Overweight	1.27 (1.12-1.44)		1.16 (1.00-1.35)	
Self-perceived dietary intake		<0.001[a]		<0.001[a]
Negative	1.43 (1.25-1.65)		1.32 (1.14-1.52)	
3rd level**				
Care model		0.026[a]		0.021[a]
Family Health Strategy	1.15 (1.02-1.30)		1.15 (1.02-1.30)	

NCDs: noncommunicable diseases; PR: Prevalence Ratio; 95CI: 95% Confidence Interval. Tests: a) Chi-squared test, b) linear trend test, c) heterogeinity test; Losses: *2 losses, **134 losses; Reference categories: male gender, 20-39 years old, black and other skin colors, without spouse, 1st quintile of income, primary education, employed, no self-reported NCDs, positive self-perception of health, normal weight, positive self-perception of dietary intake, traditional care model.

Age maintained the linear trend of association with the outcome, and older people had a 39% higher propability to receive guidelines than those between 20 and 39 years old (PR=1.39; 95CI 1.20-1.62). Skin color became significantly associated, and people with white skin color were 15% less likely to receive guidelines (PR=0.85; 95 CI 0.74-0.97). It was also observed that the higher the education the lower the probability of the outcome, a 12% reduction among users with secondary education and a 17% reduction among those with higher education or more (PR=0.88; 95 CI 0.76-1.02; PR=0.83; 95CI 0.68-1.03; linear trend p=0.037); additionally, the effect of occupation was lost after adjusment (PR=1.05; 95CI 0.91-1.22) (Table II).

In the second level, the linear trend in relation to the number of self-reported NCDs was maintained, and those with a diagnosis of three or more diseases showed a 62% higher probability of outcome (PR=1.62; 95CI 1.36-1.93). The probability of receiving guidelines was 32% higher among those who perceived their dietary intake as negative (PR=1.32; 95CI 1.14-1.52), and the effect of self-perceived health and nutritional status was lost after adjustment. Still, users of the ESF had a 15% higher probability of receiving guidelines to healthy eating (PR=1.15; 1.02-1.30) (Table II).

DISCUSSION

Despite the recognized importance of healthy eating and the vast recommendation, especially in terms of public health system, that the population should receive guidelines to adequate and healthy eating habits, there are few studies addressing, in a representative way, the provision of this action in primary health care in Brazil. Thus, this research was conducted with all the urban primary care network of a medium-sized municipality in Southern Brazil and showed that less than half of the users received the guidelines.

The results showed a prevalence of guidelines to healthy eating 42% higher than those found in population-based studies in the United States and Canada – 21.3%[20] and 37.6%[1], respectively. The value found is also higher than the 20.3% reported by another Brazilian study conducted with users of a UBS with ESF in Belo Horizonte, Minas Gerais[17]. Likewise, although the outcome is different, the findings surpass a population-based study in Brazil, which showed a prevalence of circa 30% for specific dietary guidelines[16]. The results may have been different because of the distinction between samples – the present study did not use a population-based sample; however it included users of the entire primary care network of the city.

With regard to demographic and socioeconomic characteristics, even after adjustment, the effect of female gender on the occurrence of the outcome was maintained, unlike what was found in the United States, where the variables were not associated with each other[20], and Canada, where there was a higher probability of receiving guidelines among men[1]. However, the result is in line with other national studies[16,17], showing that in Brazil women are, in fact, more likely to receive guidelines to healthy eating. This may be explained by the fact that they use health services more often than men[21] and are, most of the time, responsible for the food consumed by the family. It is known that women are more concerned with both health and diet issues, especially the ones related to aesthetics[22-24], which can lead them to ask for further information about care at the time of consultation.

The older the age, the greater the probability of receiving guidelines, a finding that differs from those of an American research, in which no differences were observed[20], and a Canadian research, where the probability of receiving guidelines was higher among individuals between 35 and 54 years old[1]. However, the results of the present study corroborate others that – although conducted with adults only – presented a similar linear trend of increase in the probability of receiving guidelines as age increased[16]. The reason for this may be the increased prevalence of chronic diseases throughout life, which requires specific dietary recommendations as part of the treatment, as well as the fact that older people are more concerned about health and nutrition than young people, which can lead to an increased prevalence of guidelines[25-27].

Differences regarding skin color were found and they differ from the results of a study conducted with the American population. However, a study conducted in Brazil[16] also identified a higher prevalence of guidelines for the low intake of salt and fat among Brazilians with black skin color; these findings may be related to the association between skin color and hypertension[28].

With regard to health and dietary intake, the results are consistent with the literature[1,16,17] and showed that the higher the number of self-reported NCDs the greater the probability of receiving guidelines to healthy eating. However, while other researchers have found an association between overweight and greater probability of receiving guidelines[16,20], the results of the present study showed that the effect of this variable has been lost with the adjustment, possibly due to the association of the outcome with the self-reported NCDs.

The greater probabilioty of the outcome among those with chronic diseases was expected; therefore, given that dietary intake is part of the non-pharmacological treatment of these diseases, it is probable that, as recommended, many users have received dietary guidelines after diagnosis. On the other hand, if NCDs are among the main morbidity and mortality causes in the country and account for 58%

of the years of potential life lost[7], the observation that more than half of respondents had at least one NCD may be indicate a more curative nature of health services rather than preventive and health-promoting.

The diet is one of the main factors associated with NCDs; the promotion of healthy eating is one of the thematic axes in the National Health Promotion Policy (*Política Nacional de Promoção da Saúde*)[6] and constitutes a guideline of the National Food and Nutrition Policy (*Política Nacional de Alimentação e Nutrição*)[7] aimed at – in addition to the comprehensive care of existing diseases – the development of preventive actions at all stages of life in order to reduce their occurrence. However, the high prevalence of these diseases, both in the general population and in users of the public health system, suggests the existence of failures that need to be better understood through studies addressing issues related to: population coverage by the ESF; the provision of services based on spontaneous demand; qualification, training, and working conditions of primary health care professionals; and the intersectoral aspect of the promotion of health and healthy eating.

Still with regard to the factors analyzed in the present study, users who had a negative perception of their dietary intake were more likely to receive guidelines, suggesting that when users rate their dietary intake as inadequate they demand more attention from health professionals. The effect of self-perceived health was lost after adjustmetn, and the data available in the literature are not consistent regarding the effect of this factor[1,20].

Regarding the health care model, it is important to clarify that even though the ESF coverage in the urban network is 38.9%, the majority of respondents used the ESF (53.7%) – this difference is due to the higher proportion of consultations in units with the strategy. As expected, given the preventive and educational nature of the ESF[11], the results showed that the probability of the outcome was higher among users receiving this model of care, although it has not been assessed in relation to guidelines to physical activity in primary care[29].

However, it is necessary to highlight that less than half of the users received guidelines to healthy eating, indicating that in addition to the factors analyzed in the present study, which pointed to difficulties in the provision of guidelines due to sociodemographic factors and health and dietary conditions of users, other barriers may be hindering the fulfillment of this task.

It should be noted that the present study did not aim to assess who provided the guidelines, the nature of their content, users' understanding and adherence or the impact on their quality of life. The aim was to determine whether the action recommended by health policies and programs is delivered to users of the system. Additional information needed for the necessary expansion of care provion could be obtained through an analysis from the professionals' point of view, ranging from the frequency of the provision of guidelines to their training for action, whether arising from their professional training, active search for knowledge and qualification or continuing education programs offered by the health system management.

Other points to be elucidated involve the quality and effectiveness of guidelines when it occurs as well as the performance of NASF teams in order to assess, in municipalities where the strategy is implemented, whether the reality is similar or different from the one found in the present study. With the inclusion of nutritionists working with the teams under a matrix management, encouraging the provision of guidelines and contributing to continuing education, there could be a higher prevalence of guidelines as professionals might feel more confident for the implementation of the guidelines – according to them, the lack of knowledge is one of the main reasons for the low provision of guidelines[30].

Before concluding this study, it is necessary to consider the limitations that may have influenced the findings. It should be noted that due to the cross-sectional design, the factors mentioned cannot be considered determinants, but associated with the outcome. Another limitation is the possibility of reverse causality between certain factors and the outcome studied. However, both were expected and are inherent to cross-sectional studies, which are the most used to evaluate health services. Because of the intention of knowing the provision of guidelines along the user's contact with the service, the assessment of the outcome did not stipualte a certain period of time, which may have underestimated the prevalence due to the possibility of recall bias. As this is a healthcare service-based study conducted with users of primary care, the sample had a higher proportion of women and thus the results are not generalizable to adults and the older population. Moreover, the interviews in the waiting room of the UBS may have affected the results, under- or over-estimating some variables. On the other hand, the low percentage of losses and the adequate statistical power for most of the analyzes should be highlighted.

CONCLUSION

In primary care, guidelines to healthy eating is not universal and there is inequity, making clear the need for greater efforts to increase their provision. Greater attention should be given to men, younger individuals, those with white skin color and those with no diagnosis of chronic diseases.

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