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FOOD CONSUMPTION, QUALITY OF LIFE, SOCIODEMOGRAPHIC CHARACTERISTICS AND WORK OF TEACHERS OF A CITY IN SÃO PAULO, BRAZIL

¹Cristiane Gomes da Silva, ¹Narcisio Rios Oliveira, ²Nyvian Alexandre Kutz, ¹Jaqueline Néry Carvalho, ¹Natália Miranda da Silva, ³Leslie Andrews Portes, ^{4,*}Marcia Maria Hernandez de Abreu de Oliveira Salgueiro

¹Graduating in Nutrition from the Adventist University Centre of São Paulo (UNASP), Brazil

²Nutritionist, master student in Human Nutrition Applied by the University of São Paulo (USP), CNPq Scholarship holder, Brazil

³MSc in Medical and Biological Sciences, Physical Education Teacher from the Adventist University Centre of São Paulo (UNASP), Brazil

⁴PhD in Public Health, Nutritionist, Professor of the Professional Master's Degree in Health Promotion at the Adventist University Centre of São Paulo (UNASP), Brazil

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ABSTRACT

A cross-sectional study with the objective of verifying the quality of life, food consumption, sociodemographic and work characteristics of teachers of the municipal basic education network of a city in São Paulo, Brazil. In this research, 419 teachers participated, 94% were female, 59% were overweight and 70% needed to improve their living habits. There were no significant differences between the categories of feeding score in relation to age, teaching time, weekly workload and daily shifts of classes. The better the feeding score, the lower the body weight, body mass index and number of schools that act ($p < 0.05$). It was concluded that teachers with better quality in the diet had better body weight and body mass index, performed in a smaller number of schools and had a better perception of the quality of life.

*Corresponding author

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INTRODUCTION

Teachers play a key role in the formation and development of society (Brum *et al.*, 2012), and are responsible for transforming citizens into life (Pereira *et al.*, 2003; Gasparini; Barreto; Assunção, 2005; Pereira, 2003). The recent interest in the wellness of the teacher has pointed out the relation between work and its health conditions, providing both contentment and pleasure, as well as causing illnesses, arising from the conditions of their work, bringing anguish and suffering, which can result in mental problems (Landini, 2007). The difficulties experienced by these professionals have serious

consequences for themselves as well as for the students and for the current educational system (Brum *et al.*, 2012). The increase in the labor demand, low autonomy and remuneration, lack of material and human resources and the lack of recognition are related to the decline in the quality of life of these professionals (Damásio, Melo and Silva, 2013), exerting a negative influence on the learning process of students (BRUM *et al.*, 2012). The quality of life (QOL) and work of teachers of basic education has been highlighted in the social discussions, since much of the life of these professionals is passed within the schools (Pereira *et al.*, 2009a). The concept of QOL has undergone changes throughout history (Brum *et*

al., 2012). According to the World Health Organization (WHO), QOL is comprised of an individual's perception of the individual's position in life in the context of their culture and value system in which they are inserted and in relation to their goals, expectations, standards and concerns. It is a concept of wide reach, affected in a complex way by the physical health, psychological state, level of independence, social relations and relations with the characteristics of the environment of the individual (The WHOQOL Group, 1995). Initiatives to improve and valorize the work of these professionals are essential for the promotion of well-being and their QOL (Gonçalves et al., 2008). In addition to teaching, teachers participate in school management and planning, link the school to the community (Gasparini, Barreto e Assunção, 2005; Brum et al., 2012), act as health promotion agents (Pereira et al., 2003) and often represent a model to be followed by their students (Gallina et al., 2013, Pereira, 2003). It is, therefore, actions of protection and valorization of the health of the teachers by the governments and other representative entities of class, in the search for improvements of the QOL of the same, that in turn reflect in the development of their professional activities, in the life of their students and society. This study aimed to verify the QOL, food consumption, sociodemographic characteristics and the work of teachers of the municipal basic education network of a city of São Paulo.

MATERIALS AND METHODS

This is a cross-sectional descriptive study, using secondary data from the study "Evaluation of the quality of life of teachers of a municipality of São Paulo". The sample (n) was estimated based on the teacher population (N = 1,200) of the municipal network, admitting sample error (e) of 5% (e = 0.05), critical value for the 95% (Z = 1.96) and probability (p) of occurrence of inadequate feeding of 40% (p = 0.40), according to Miot (2011), using the following equation:

$$n = \frac{N \cdot Z^2 \cdot p \cdot (1 - p)}{Z^2 \cdot p \cdot (1 - p) + e^2 \cdot (N - 1)}$$

At where:

n - calculated sample

N - population

Z - standardized critical value associated with the 95% confidence level

p - true probability of the event

e - sample error

The sample initially estimated was 283 teachers. It was decided to increase 30% due to the possible dropouts or denials, natural in this type of study, raising the value for 368 teachers. The sociodemographic variables studied were: age (years), sex (female or male), economic class and marital status (single, married, widowed and separated). Information related to the work was: educational level, teaching time, weekly workload, work shifts and number of schools in which he taught. For the economic classification, the information regarding schooling and the presence of consumer goods in the household were analyzed based on the *Critério de Classificação Econômica Brasil*, which grants points for each item, according to its domicile characteristic, and the economic classes can be classified in A1, A2, B1, B2, C1, C2, D e E, divided in A (A1 + A2), B (B1 + B2), C (C1 + C2) e D + E (ABEP, 2012). With the weight and height data self-reported

by the teachers, the classification of the nutritional status was performed using the Body Mass Index (BMI) as proposed by the WHO for adults (WHO, 2000). The WHOQOL-bref questionnaire was used to evaluate QOL, an instrument developed by The WHOQOL Group for quantitative QOL assessment; adapted and validated in Brazil by researchers from UFRGS (Fleck et al., 2000), and translated by back-translation with mean estimation and standard deviation of words, to obtain the most correlated version of the original document.

Food consumption was assessed by the questionnaire "Como está sua alimentação?", which consists of an instrument prepared by the Ministry of Health, available in the food guide for the Brazilian population, composed of 18 closed questions. The evaluation of this variable followed the guidelines and criteria proposed by the authors (Brasil, [s.d.]). All analyzes were performed using the statistical package SPSS 22, version, and by GraphPad Prism version 6.0 for Windows. The results were expressed as mean ± standard deviations and respective 95% CI, and in percentages. The normality of the variables was tested using the method of D'Agostino and Pearson. The associations between the different variables were determined using the Pearson or Spearman correlation coefficients as needed. The QOL perception scores of each of the four domains and the general score were grouped into 5 categories: up to 19.9 points: very low, from 20.0 to 39.9 points: low, from 40.0 to 59, 9 points: regular, from 60.0 to 79.9 points: good and from 80.0 to 100.0 points: very good (The WHOQOL Group, 1998). Feed scores were grouped into three categories according to the questionnaire "Como está sua alimentação?" (Brasil, [s.d.]): up to 28 points: Need to improve, from 29 points to 42 points: Attention and 43 points or more: Congratulations. The three feeding categories, based on the recommended cut-off points, allowed comparing the results of the other variables by means of one-way analysis of variance or the Kruskal-Wallis test, according to the need, followed respectively by the tests for multiple comparisons of Tukey or Dunn. In all cases, the results were considered statistically different when p < 0.05. This research was approved by the Research Ethics Committee of the Adventist University Centre of São Paulo (UNASP) under CAAE nº 36203214.4.0000.5377 on October 23, 2014 and by the Municipal Education Department.

RESULTS

A total of 419 teachers from the municipal network of a city in São Paulo were evaluated and the general information on the sample is summarized in Table 1. Most of the teachers were married (59%), from economy class B (77%), whose family the boss had a higher level (67%), used own transport to go to work (54%), (92%), average teaching time of 13,0±8,8 years, workload of 42,6±15 hours, working two shifts per day (67%) in two different schools (57%). In addition, 59% of the teachers were overweight (overweight and obese). The QOL data, as assessed by the WHOQOL questionnaire, are summarized in Table 2.

The teachers' perception of the physical, psychological and social domain, respectively, was good (50%, 62% and 52%), but their perception of the environment was only regular (53%). Overall, QOL was considered good by 63% of the evaluated teachers. Table 3 summarizes the findings related to food consumption.

Table 1. General characteristics of teachers of the municipal network of a city of São Paulo, 2015

Variables	N	IC95%
Age (years)	40,1±8,9	39,3;41,0
Gender (M/F)	25/394 (6%/94%)	-
Estado civil	Singles.....114 (27%)	-
	Married.....247 (59%)	
	Widowed.....6 (1%)	
	Separated.....21 (5%)	
Economy class	A.....36 (9%)	-
	B.....322 (77%)	
	C.....61 (15%)	
	D + E.....0 (0%)	
Degree of instruction of the head of the family	<4 years.....22 (5%)	-
	<8 years.....33 (8%)	
	<12 years.....18 (4%)	
	Incomp. College.....67 (16%)	
	Full College.....279 (67%)	
Means of transport to work	Own.....227 (54%)	-
	Public.....177 (42%)	
	Own/Public.....10 (2%)	
	On foot.....5 (1%)	
Education	College.....387 (92%)	-
	Postgraduate.....32 (8%)	
Time of teaching (years)	13,0±8,8	12,2;13,8
Weekly load (hours)	42,6±15,0	41,1;44,0
Number of daily shifts	1 shift.....129 (31%)	-
	2 shifts.....282 (67%)	
	3 shifts.....7 (2%)	
	Blank.....1 (0%)	
Number of schools in which you work	1 school.....174 (42%)	-
	2 schools.....239 (57%)	
	3 schools or more.....6 (1%)	
Height (m)	1,625±0,073	1,62;1,63
Body weight (kg)	70,7±14,4	69,4;72,1
BMI (kg/m ²)	26,8±5,1	26,3;27,2
Classification	Low weight.....5 (1%)	-
	Eutrophic.....169 (40%)	
	Overweight.....145 (35%)	
	Obesity.....100 (24%)	

Table 2. QOL of teachers of the municipal network of a city of São Paulo, 2015

Variables	N	CI95%
General quality of life	68,0±11,3	67;69
Classification	Very low.....1 (0%)	-
	Low.....4 (1%)	
	Regular.....96 (23%)	
	Good.....263 (63%)	
	Very good.....55 (13%)	
Physical domain	72,2±14,7	71;74
Classification	Very low.....1 (0%)	-
	Low.....10 (3%)	
	Regular.....68 (16%)	
	Good.....211 (50%)	
	Very good.....129 (31%)	
Psychological domain	71,4±12,4	70;73
Classification	Very low.....0 (0%)	-
	Low.....7 (2%)	
	Regular.....64 (15%)	
	Good.....260 (62%)	
	Very good.....88 (21%)	
Social domain	72,2±15,6	71;74
Classification	Very low.....1 (0%)	-
	Low.....9 (3%)	
	Regular.....78 (19%)	
	Good.....217 (52%)	
	Very good.....114 (27%)	
Environment domain	56,1±12,9	55;57
Classification	Very low.....2 (1%)	-
	Low.....39 (9%)	
	Regular.....221 (53%)	
	Good.....145 (35%)	
	Very good.....12 (3%)	

Table 3. Food consumption of teachers of the municipal network of a city of São Paulo, 2015

Variables	Classification
Feeding score	Need to improve.....26 (6%)
	Attention.....294 (70%)
	Congratulations.....99 (24%)
Daily fruit consumption	Appropriate.....112 (27%)
	Inadequate307 (73%)
Daily consumption of vegetables	Appropriate.....97 (23%)
	Inadequate322 (77%)
Daily consumption of beans and oilseeds	Appropriate.....264 (63%)
	Inadequate155 (37%)
Daily consumption of cereals (breads, cakes, rice and others.)	Appropriate55 (13%)
	Inadequate364 (87%)
Daily consumption of meat and/or eggs	Appropriate.....153 (37%)
	Inadequate266 (63%)
Usually removes the apparent fat from meats	Appropriate.....339 (81%)
	Inadequate80 (19%)
Weekly fish consumption	Appropriate.....67 (16%)
	Inadequate352 (84%)
Daily consumption of milk and dairy	Appropriate.....83 (20%)
	Inadequate336 (80%)
Consumption of milk with fat reduction	Appropriate.....182 (43%)
	Inadequate237 (57%)
Consumption of fried foods, sausages and flavored snacks	Appropriate.....300 (72%)
	Inadequate119 (28%)
Consumption of sweets, cakes, stuffed, soft drinks	Appropriate.....259 (62%)
	Inadequate160 (38%)
Type of fat most used for cooking	Appropriate.....402 (96%)
	Inadequate.....17 (4%)
Adds salt to foods already prepared	Appropriate.....390 (93%)
	Inadequate.....29 (7%)
Daily habitual meals	Appropriate.....139 (33%)
	Inadequate280 (67%)
Water consumption	Appropriate.....154 (37%)
	Inadequate265 (63%)
Consumption of alcoholic beverages	Appropriate.....250 (60%)
	Inadequate169 (40%)
Regular physical activity (30 minutes/day) in your free time	Appropriate.....122 (29%)
	Inadequate297 (71%)
Reading food labels	Appropriate.....94 (22%)
	Inadequate325 (78%)

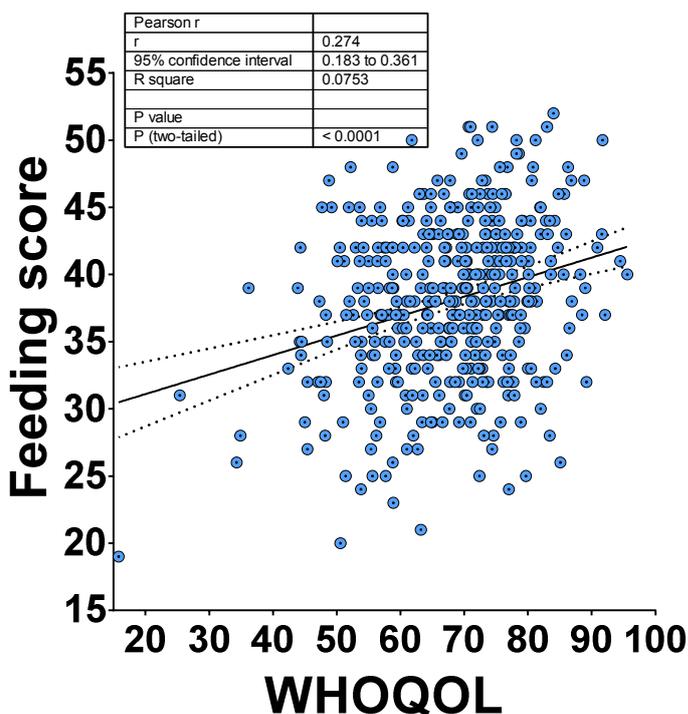


Figure 1. Correlation and respective linear regression (95% CI) between the feeding score and the general QOL score of teachers of the municipal network of a city of São Paulo, 2015

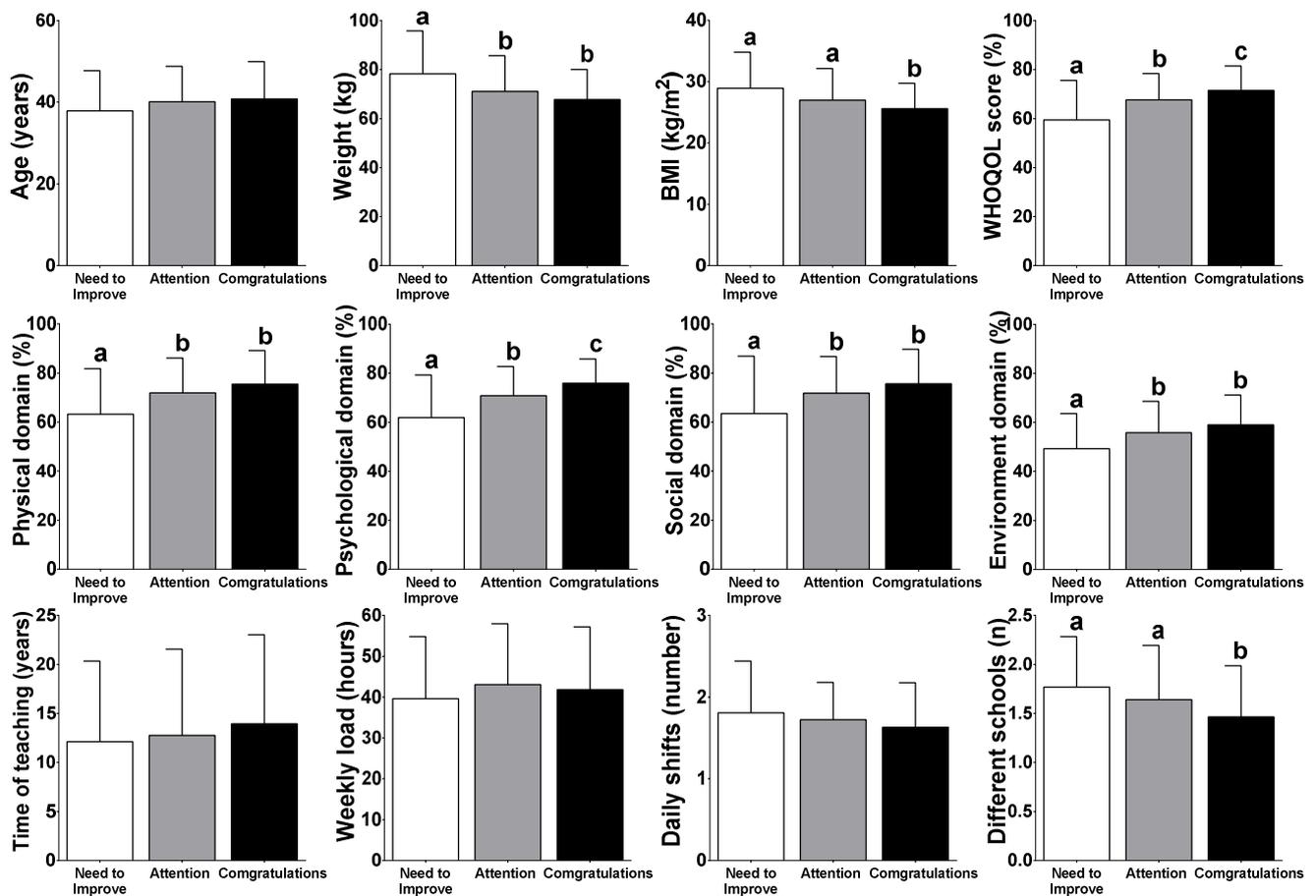


Figure 2. Anthropometric, QOL and teaching aspects distributed in the three categories according to the questionnaire “*Como está sua alimentação?*” (Need to improve, Attention and Congratulations) of teachers of the municipal network of a city of São Paulo, 2015. Different letters indicate statistically significant differences ($p < 0.05$) between the categories of food

Only 6% of teachers showed low food scores, which indicate that they need to improve and make eating and other healthy habits (**need to improve**). On the other hand, 70% of them showed scores indicating the need for attention with food and other habits (**attention**). Additionally, 24% of teachers received scores equal to or greater than 43 points, indicating that their nutrition is on the way to a healthy way of life (**congratulations**). All the correlation coefficients between the various food items (18 items) and their general score, the WHOQOL questions (26 questions), their scores in each domain and their general score, and the teaching, anthropometric and socioeconomic parameters were very weak ($r < 0.20$) or weak ($r < 0.40$). Only the correlations between the feed score and domains physical ($r = 0.22$), psychological ($r = 0.28$), social ($r = 0.18$), environment ($r = 0.23$) and general QOL score ($r = 0.27$) were statistically significant ($p < 0.05$). Figure 1 shows the association between feeding score and QOL. There were no significant differences between the three categories, regarding age, teaching time, weekly workload and daily classes. However, the better the feeding score, the lower the values of body weight, BMI and number of schools that work. In addition, the better the feed score, the better the scores in each of the four QOL domains and the overall QOL score ($p < 0.05$).

DISCUSSION

The teachers studied are predominantly female (94%), with a average age of $40,1 \pm 8,9$ years, mostly married (59%), of

economy class B (77%), with full college (100%), two shifts per day (67%) and work in 2 places of work (57%). Similar data were found by Santos and Marques (2013) in a study carried out with 414 teachers of basic education of a municipality of Rio Grande do Sul, who found that 53.7% were married, 70% of economic class B, 86.4% had completed upper level and 74% worked on more than one shift daily. In a study by Tavares *et al.* (2015), it was found that the teachers had an average of 16 and 17 years of professional performance, which coincides with the one found in the present study where the average teaching time was 13 years. In this study, the analysis of the associations between the variables was shown to be weak between the anthropometric data, teaching and the feeding score, but it is possible to affirm that in the studied group, the better the better the score, body weight and BMI, in addition to the smaller number of different places of work of these teachers. The concept of QOL has undergone changes throughout history, which was once based simply on the material aspects (Brum *et al.*, 2012), currently according to the WHO is affected in a complex way by the physical health, psychological state, level of independence, social relations and with the characteristics of the environment that the individual lives (The WHOQOL Group, 1995), therefore, the expression QL is understood as the degree of satisfaction of the subject with the environment in which he lives (Pereira; Teixeira; Lopes, 2013), being specific to each individual or group (Brum *et al.*, 2012). The QOL of basic education teachers has been highlighted in the social discussions lately, since these professionals spend much of

their lives in the work environment (Pereira *et al.*, 2009a). The teacher plays an extremely important role as a health promotion agent in the school (Pereira *et al.*, 2003), and previous knowledge is necessary in order to develop a critical sense in his students about health issues (Nonose; Braga, 2008).

Regarding teachers' perception of general QOL (67.69%) and in the physical (71.74%), psychological (70.73%), social (71.74%) and environment (55.57%) domains, the findings in this study corroborate the values found for general QOL and in these domains by Pereira *et al.* (2014) studied a sample of 349 teachers of basic education in the capital of Santa Catarina, which presented respectively (63.75%, 65.7%, 68.61%, 73.1% and 53.93%), highlighting the low classification in the environment domain. According to Fleck *et al.* (2000), the domains analyzed compete with individual perception regarding physical domains (feeling of pain, need for medical treatment, energy for daily activities, ability to work and satisfaction with sleep), psychological (positive feelings (personal, family and friends relationships as well as sexual life) and environment (climate, safety, transportation, leisure, financial resources and opportunity to acquire new knowledge). Regarding the low prevalence in the environmental domain, the classrooms do not always offer adequate physical structures for the good development of educational activities, besides the insecurity influenced by the urban violence, since the municipality of Carapicuíba is located in the metropolitan region of São Paulo. In relation to the general QOL of the teachers studied, 76% presented good or very good perception. On the other hand, the food score was "Attention", in 70% of the respondents, indicating the need for improvements in diet and other habits of life. In this group, the values of inadequate consumption of fruits, vegetables and grains, cereals, meats and / or eggs, fish, milk and dairy products, as well as the inadequate number of meals, water consumption, natural juices and teas are highlighted. absence of regular physical activity and reading of food labels. According to D'Alencar *et al.* (2010), we would not have health and QOL without adequate nutrition and nutrition, which are fundamental elements for the promotion and protection of workers' health. Santos and Marques (2013) affirm that healthy lifestyle habits, which include weight control and a balanced diet, are important for QOL and health. Excess weight may compromise the individual's QoL due to its association with the appearance of various metabolic and functional disorders, as well as the development of obesity, which in turn is associated with other diseases such as diabetes mellitus, pulmonary dysfunctions and cardiovascular diseases (Salve, 2006). Thus, it is necessary to control body weight and promote health, through the adoption of healthy food (Brasil, 2003) and physical activity practice (Salve, 2006).

Food is a fundamental right of the human being, according to article 25 of the Universal Declaration of Human Rights (1948), and health and well-being are of equal level. In the Federal Constitution of the Federative Republic of Brazil (1988), Article 6 states that food and health are social rights for all Brazilians. According to Ferreira and Magalhães (2007), food and nutrition are considered as "basic requirements for the promotion and protection of health, enabling the full affirmation of the potential for human growth and development with quality of life and citizenship", which corroborates with the idea that food is a preponderant factor for individual and collective QOL. In a study carried out with

79 primary school teachers in a city in the south of Brazil, the authors concluded that the habits and eating habits of these teachers were fragile, especially regarding the consumption of fruits and milk and derivatives. On the other hand, the frequency of consumption of foods such as cakes, biscuits, soft drinks and the like was relatively low, emphasizing the importance of consistency between the practices and the discourses of these professionals (Gallina *et al.*, 2013). Fruit consumption in this study was inadequate in 73% of the respondents, corroborating the study by Gallina *et al.* (2013), which verified inadequacy in 64.6% of the analyzed ones. The new Food Guide for the Brazilian Population recommends the ingestion of three or more servings of fruits a day, considered as sources of fiber, vitamins and minerals and for presenting in its composition compounds that contribute to the protection and promotion of the health of the individual (Brasil, 2014). This study presented a 77% inadequacy in the consumption of vegetables and vegetables, contrary to the research by Gallina *et al.* (2013) who verified adequate consumption of this group in 70.8% of respondents. The Food Guide for the Brazilian Population recommends the daily consumption of three portions distributed in the main meals, due to the association between the consumption of these foods and the reduction of the risk of the occurrence of chronic noncommunicable diseases (NCDs) (Brasil, [S.D.]).

As for cereal consumption, inadequacy was present in 87% of teachers, which requires special attention to the consumption of this group of foods, which are sources of carbohydrates, fibers, vitamins and minerals. When combined with legumes (beans) they represent a protein source of excellent quality in the diet (Brasil, 2014). The daily consumption of meat and / or eggs in the population studied was inadequate in 63% of the individuals, contrary to the values found by Gallina *et al.* (2013), that 59.5% of the respondents presented adequate consumption. This food group excels as a source of protein, vitamins and minerals, giving preference to lean cuts and grilled or baked preparations (Brasil, 2014). In the present study, 84% of the teachers studied presented inadequate fish consumption. This low consumption among teachers is also observed in the country, while consumption is around 4 kg/inhab/year (IBGE, 2010), the WHO recommendation is at least 12 kg / hab / year (WHO, 2007). Although Brazil has a large coastline and large rivers, in most regions the supply of fish is still insufficient and prices are relatively high compared to red meat and poultry, which suggests the low frequency rates of consumption in the country (Brasil, 2014) and this research. Regarding the consumption of milks and derivatives, this research presented inadequacy of 80%, a value similar to that found by the research of Surveillance of Risk Factors and Protection for Conical Diseases by Telephone Inquiry (Vigitel) (Brasil, 2016) in which the consumption of whole milk was 51.5% among those surveyed. Thus, it is important to emphasize public health policy issues, since milk and dairy products are considered the main sources of calcium in the diet, while low calcium consumption is associated with the development of osteoporosis (Pereira *et al.*, 2009b), assuming an increased risk for the future development of osteoporosis in the studied population. In Brazil, data from the Family Budgeting Search 2002-2003 presents a substitution of the consumption of milk and derivatives for the refrigerant, collaborating to increase the deficiency of this nutrient and development of diseases (IBGE, 2004). Regarding the type of milk, the new Food Guide for the Brazilian Population (Brasil, 2014), suggests the substitution of whole milk consumption for

skimmed or semi-skimmed milk, because it is high in saturated fats, which correlate with cardiovascular diseases and other chronic diseases (Pereira *et al.*, 2009b).

Regarding the usual meals, the present study reported inadequacy in 67% of the analyzed patients, contrary to the Vigitel survey conducted with the adult population of both sexes, living in the 26 capitals of the Brazilian states and in the Federal District, where only 15.5% reported the habit of exchanging lunch or dinner for snacks (Brasil, 2016). The omission of meals favors the emergence of nutritional deficiencies and contribute to the development of overweight and obesity (Paraná, 2014). The new Food Guide for the Brazilian Population recommends as a healthy eating habit the consumption of three main meals interspersed or not with snacks (Brasil, 2014). In view of this, there is a need to improve the number of meals performed by the teachers studied. In this study 63% of respondents reported inadequate water consumption. It is known that the human body is formed predominantly by water, corresponding approximately to 60% in men and 50 to 55% in women. It is important to emphasize the importance of this nutrient in the regulation and maintenance of various organs and vital functions in the body, according to the Food Guide for the Brazilian Population, the recommendation of water consumption for the adult population is 1ml/kcal per day (Brasil, [S.D.]). Regarding the practice of physical activity, the inadequacy was present among 71% of the teachers analyzed, which corroborates with the Vigitel survey (Brasil, 2016), in which only 37.6% of those surveyed reported moderate physical activity at least 150 minutes per week in free time.

The predominance of physical inactivity is a challenge for public health, since it is among the main risk factors for deaths caused by NCD (Brasil, 2016). The practice of regular physical activity is part of a set of strategies adopted by the WHO for the prevention and control of NCD, associated with the reduction of the risk of cardiovascular disease, diabetes, colon and breast cancer (Barreto *et al.*, 2005). As to the habit of reading food nutritional labels, 78% of the teachers of this research did not perform such practice, reinforcing the study by Gallina *et al.* (2013), who reported the lack of this habit in 67.1% of the teachers analyzed. In a study carried out by Bendino, Popolim and Oliveira (2012), when analyzing 50 consumers of 2 conventional supermarkets in a city in the greater São Paulo, they found that 76% of the interviewees consider that it is not important to carry out the consultation of nutritional information. It is essential to encourage the reading of nutritional labels, which according to the National Sanitary Surveillance Agency, the food labels indicate to the consumer the quantity and quality of the foods to be ingested, being part of a set of nutrition strategies in with the Ministry of Health in order to promote healthy choices and reduce the risk of developing chronic diseases (Brasil, 2005). Interministerial Ordinance No. 1010, recommends the awareness and training of professionals involved in school feeding for the promotion, production and supply of healthier foods (Brasil, 2006). It also highlights the development of ongoing programs to promote healthy eating habits and the incorporation of the theme of healthy eating into the political pedagogical project of primary schools of private and public networks in Brazil (Brasil, [S.D.]).

In a study with directors, coordinators, teachers, food handlers and representatives of the school council of six elementary

schools in Brasília - DF, carried out by Camozzi *et al.* (2015), emphasized the importance of updating the teacher's professional training in relation to the multiple dimensions of the act of eating, taking into account the diet not only as a biological act, but as having established social meanings. In this context, the teacher presents himself as a central member of the health team at the school, mainly because of his involvement with the students (Davanço, Taddei, Gaglianone, 2004). According to Camozzi *et al.* (2015), the teacher plays a role that goes beyond the transmission of knowledge, and is responsible for acting as an interlocutor of food choices, creating situations and inserting meaning to the learning, as well as presenting as behavioral models, which facilitates the sharing of experiences and opinions about food among their students. The main limitations of the present study were the teachers' lack of interest and willingness to participate in the research, loss of the "n" sample of the survey by exclusion of questionnaires because of incomplete filling or confusing information, in addition to the limited number of studies to compare the results.

Conclusion

The results of this study allow us to conclude that the teachers with the best quality in the diet had better body weight and BMI, acted in a smaller number of schools and had a better perception of the general QOL and in the three domains of the feeding score. Dietary habits are related to the health and QOL issues of these individuals, which may impact health promotion actions in the school environment, given their important role as mediator of the learning process, becoming, therefore, the main agent promoting health in school, due to their greater contact with students, as well as parents and society, even beyond the limits of classrooms. It is important to highlight the importance of this study for the development of new research to verify the factors related to food and QOL of primary education teachers, given the scarcity of national studies related to the proposed theme, making it difficult to discuss and compare the results found.

REFERENCES

- ABEP – Associação Brasileira de Empresas de Pesquisa. Critério de classificação econômica Brasil (2012). Disponível em: <http://www.abep.org/criterio-brasil>
- Barreto SM, Pinheiro ARO, Sichieri R, Monteiro CA, Filho MB, Schimidt MI, *et al.* 2005. Análise da estratégia global para alimentação saudável, atividade física e saúde, da Organização Mundial da Saúde. *Epidemiol. Serv. Saude.* 14(1), 41-62.
- Bendino NI, Popolim WD, Oliveira CRA. 2012. Avaliação do conhecimento e dificuldades de consumidores frequentadores de supermercado convencional em relação à rotulagem de alimentos e informação nutricional. *J Health Sci Inst.* 30(3), 261-265.
- Biblioteca Virtual De Direitos Humanos. Declaração Universal dos Direitos Humanos, 1948. Disponível em: <http://www.direitoshumanos.usp.br/index.php/Declara%C3%A7%C3%A3o-Universal-dos-Direitos-Humanos/declaracao-universal-dos-direitos-humanos.html>
- Brasil. Constituição, 1988. Constituição da República Federativa do Brasil. Brasília: Senado Federal; 2016.
- Brasil. Diário Oficial da União, 2006. Portaria interministerial nº 1.010, de 8 de Maio de 2006. Institui as diretrizes para a Promoção da Alimentação Saudável nas Escolas de

- educação infantil, fundamental e nível médio das redes públicas e privadas, em âmbito nacional.
- Brasil. Ministério da Saúde. 2003. Obesidade e desnutrição. NUT/FS/UnB. ATAN/DAB/SPS. Brasília: Ministério da Saúde. Disponível em: http://bvsm.s.saude.gov.br/bvs/publicacoes/obesidade_desnutricao.pdf
- Brasil. Ministério da Saúde. [s. d.]. Guia alimentar: como ter uma alimentação saudável Brasília: Ministério da Saúde (Guia de bolso).
- Brasil. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. 2005. Rotulagem nutricional obrigatória: manual de orientação às indústrias de Alimentos. 2ª ed. Brasília: Ministério da Saúde.
- Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica, 2014. Guia alimentar para a população brasileira. Brasília: Ministério da Saúde.
- Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância de Doenças e Agravos Não Transmissíveis e Promoção da Saúde, 2016. Vigitel Brasil 2015: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico. Brasília: Ministério da Saúde.
- Brum LM, Azambuja CR, Rezer JFP, Temp DS, Carpilovsky CK, Lopes LF, et al. 2012. Qualidade de vida dos professores da área de ciências em escola pública no Rio Grande do Sul. *Trab. educ. saúde.* 10(1), 125-145.
- Camozzi ABQ, Monego ET, Menezes IHCF, Silva PO. 2015. Promoção da alimentação saudável na escola: realidade ou utopia? *Cad Saúde Colet.* 23(1), 32-37.
- D'alencar ER, Lima MMR, Mendonça PML, Custódio IL, D'alencar BP, Lima FET. 2010. Ações de educação em saúde no controle do sobrepeso/obesidade no ambiente de trabalho. *Rev Rene.*, 11(1), 172-180.
- Damáσιο BF, Melo RLP, Silva JP. 2013. Sentido de Vida, Bem-Estar Psicológico e Qualidade de Vida em Professores Escolares. *Paidéia (Ribeirão Preto).* 23(54), 73-82.
- Davanço GM, Taddei JAAC, Gaglianone CP. 2004. Conhecimentos, atitudes e práticas de professores de ciclo básico, expostos e não expostos a Curso de Educação Nutricional. *Rev Nutr.*, 17(2), 177-184.
- Ferreira VA, Magalhães R. 2007. Nutrição e promoção da saúde: perspectivas atuais. *Cad. Saúde Pública.* 23(7), 1674-1681.
- Fleck MPA, Louzada S, Xavier M, Chachamovich E, Vieira G, Santos L, et al. 2000. Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". *Rev. Saúde Públ.*, 34(2), 178-183.
- Gallina LS, Teo CRPA, Szinwelski NK, Bohrz S, Albani G. 2013. Hábito Alimentar do Professor: Importante Elemento para a Promoção da Saúde no Ambiente Escolar. *Rev. Simbio-Logias.* 6(9), 105-116.
- Gasparini SM, Barreto SM, Assunção AA. 2005. O professor, as condições de trabalho e os efeitos sobre sua saúde. *Educ. Pesqui.* 31(2), 189-199.
- Gonçalves JP, Damke AS, Kliemann MP, Szymansky ML. 2008. O mal-estar docente segundo a percepção de coordenadores pedagógicos da rede pública de cascavel [Internet]. In: Anais do VIII Congresso Nacional de Educação – EDUCERE; Curitiba: Brasil. EDUCERE; p. 4596-4606 Disponível em: http://www.pucpr.br/eventos/educere/educere2008/anais/pdf/830_607.pdf
- IBGE – Instituto Brasileiro de Geografia e Estatística. 2004. Pesquisa de Orçamentos Familiares (POF) 2002-2003: Análise da Disponibilidade Domiciliar de Alimentos e do Estado Nutricional no Brasil. Rio de Janeiro: IBGE.
- IBGE – Instituto Brasileiro de Geografia e Estatística. 2010. Pesquisa de Orçamentos Familiares (POF) 2008-2009: Aquisição alimentar domiciliar per capita. Rio de Janeiro: IBGE.
- Landini SR. 2007. Professor, trabalho e saúde: as políticas educacionais, a materialidade histórica e as consequências para a saúde do trabalhador-professor. *Colloq Humanarum.* 4(1), 08-21.
- Miot HA. 2011. Tamanho da amostra em estudos clínicos e experimentais. *J. Vasc. Bras.*, 10(4), 275-278.
- Nonose ERS, Braga TMS. 2008. Formação do Professor para atuar com Saúde/Doença na Escola. In: Anais do VIII Congresso Nacional de Educação da PUC/PR – EDUCERE; Curitiba: EDUCERE; p. 3656-3667 Disponível em: http://www.pucpr.br/eventos/educere/educere2008/anais/pdf/407_455.pdf
- Paraná. Secretária de Educação. 2014. O Professor PDE e os Desafios da Escola Pública Paranaense 2012: Prevenção da Obesidade através de um estilo de vida ativo. Curitiba: Secretaria de Educação do Estado do Paraná. Disponível em: http://www.diaadiaeducacao.pr.gov.br/portals/cadernospde/pdebusca/producoes_pde/2012/2012_uem_edf_is_artigo_flavia_aparecida_da_silva.pdf
- Pereira DF. 2003. Ser Professor e Professora é acreditar que um outro mundo é possível [Internet]. Santo André: SINPRO ABC; outubro 2003. Disponível em: <https://pt.scribd.com/document/61229836/Ser-Professor>
- Pereira EF, Teixeira CS, Lopes AS. 2013. Qualidade de vida de professores de educação básica do município de Florianópolis, SC, Brasil. *Ciênc. saúde coletiva.* 18(7), 1963-1970.
- Pereira EF, Texeira CS, Andrade RD, Bleyer FTS, Lopes AS. 2014. Associação entre o perfil de ambiente e condições de trabalho com a percepção de saúde e qualidade de vida em professores de educação básica. *Cad. Saúde Pública.* 22(2), 113-119.
- Pereira EF, Texeira CS, Santos A, Lopes AS, Merino EAD. 2009. Qualidade de vida e saúde dos professores de educação básica: discussão do tema e revisão de investigações. *R. Bras. Ci. e Mov.* 17(2), 100-107.
- Pereira GAP, Genaro OS, Pinheiro MM, Szejnfeld VL, Martini LA. 2003. Cálculo dietético – estratégias para otimizar o consumo. *Rev Bras Reumatol.* 49(2), 164-180.
- Pereira IMTB, Penteado RZ, Bydlowski CR, Elmor MRD, Grazzelli ME. 2003. Escolas Promotoras de Saúde: onde está o trabalhador professor? *Saúde Rev.* 5(11), 29-34.
- Salve MGC. 2006. Obesidade e Peso Corporal: riscos e consequências. *Mov. Perc.* 6(8), 29-47.
- Santos MN, Marques AC. 2013. Condições de saúde, estilo de vida e características de trabalho de professores de uma cidade do sul do Brasil. *Ciênc. saúde coletiva.* 18(3): 837-846.
- Tavares DDF, Oliveira RAR, Junior RJM, Oliveira CEP, Marins JCB. 2015. Qualidade de vida de professoras do ensino básica da rede pública. *Rev Bras Promoç Saúde.* 28(2), 191-197.
- The WHOQOL Group, 1995. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. *Soc. Sci. Med.*, 41(10), 1403-1409.
- The WHOQOL Group. 1998. WHOQOL user manual. Geneva: World Health Organization.

WHO - World Health Organization, 2000. Obesity: preventing and managing the global epidemic: Report of a WHO consultation on obesity. Technical Report Series, 894. Geneva: WHO.

WHO – World Health Organization, 2007. Protein and aminoacid requirements in human nutrition. Report of a joint WHO/FAO/UNU Expert Consultation, United Nations University. Technical Report Series, 935. Geneva: WHO.
