

PRODUCTS SOLD IN SCHOOL CANTEENS OF THE MUNICIPALITY OF RIBEIRÃO PRETO

Produtos comercializados em cantinas escolares do município de Ribeirão Preto

Productos del comercio de cafeterías de las escuelas del municipio de Ribeirão Preto

Original Article

ABSTRACT

Objective: To evaluate the types of products sold in school canteens of the municipality of Ribeirão Preto, São Paulo. **Methods:** Analytical cross-sectional study conducted from May to December 2014 with a convenience sample composed of five public primary schools and five private primary schools. A structured questionnaire containing a list of foods and beverages and variables related to the implementation of healthy canteens was applied to the person in charge of the canteen of each school. The classification of foods as healthy and unhealthy was based on the document “Os 10 Passos para a Promoção da Alimentação Saudável nas Escolas” (The 10 Steps to Promoting Healthy Eating in Schools) developed by the Ministry of Health and the São Paulo State Government. **Results:** In the private schools, there was greater support from a nutritionist, availability of education materials, advertising of processed foods and a greater number of healthy food options (81.7%). In the public schools, there was a restriction of certain unhealthy foods, but few options of healthy foods were available (25.0%); however, there was a greater participation of canteen workers in nutrition education activities and greater knowledge of specific legislation. The lack of interest of parents and students was identified as a hindrance to the implementation and operation of healthy canteens in schools. **Conclusion:** Both public and private school canteens did not fully follow the recommendations of the Ministry of Health and the São Paulo State Government regarding the selling of healthy foods in the school environment, as they offered unhealthy foods. In addition, private schools offer more food options – both healthy and unhealthy – to students.

Descriptors: Food; School Feeding; Food legislation.

RESUMO

Objetivo: Avaliar os tipos de produtos comercializados em cantinas escolares do município de Ribeirão Preto, São Paulo. **Métodos:** Desenvolveu-se um estudo transversal e analítico, realizado de maio a dezembro de 2014, com amostra selecionada por conveniência, composta por cinco escolas estaduais e cinco escolas particulares de ensino fundamental. Aplicou-se, em cada uma das dez escolas, com o responsável pela cantina, um questionário estruturado contendo uma lista de alimentos e bebidas e variáveis relacionadas à implantação de uma cantina saudável. A classificação dos alimentos em saudáveis e não saudáveis baseou-se nos documentos “Os 10 Passos para a Promoção da Alimentação Saudável nas Escolas”, do Ministério da Saúde e da Portaria do Estado de São Paulo sobre comercialização de alimentos saudáveis no ambiente escolar. Utilizou-se análise descritiva para tratamento dos dados. **Resultados:** Nas escolas particulares, observou-se maior apoio do profissional de Nutrição, disponibilidade de materiais educativos, propaganda de produtos industrializados e maior número de opções de alimentos saudáveis (81,7%). Nas escolas públicas, verificou-se a restrição de determinados alimentos não saudáveis, mas poucas opções de alimentos saudáveis (25,0%); entretanto, houve uma maior participação dos cantineiros em atividades de educação nutricional e conhecimento sobre legislação específica. Identificou-se o desinteresse de pais e alunos como limitador para a instalação e operacionalização da cantina saudável nas escolas. **Conclusão:** As cantinas investigadas, tanto de escolas públicas quanto de particulares, não seguiam integralmente as recomendações do

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Ministério da Saúde e da Portaria do Estado de São Paulo sobre comercialização de alimentos saudáveis no ambiente escolar; pois ofertavam alimentos considerados não saudáveis. Além disso, as escolas particulares oferecem mais opções de alimentos, tanto saudáveis quanto não saudáveis, para seus alunos.

Descritores: Alimentação; Alimentação Escolar; Legislação Sobre Alimentos.

RESUMEN

Objetivo: Evaluar los tipos de productos del comercio de las cafeterías de las escuelas del municipio de Ribeirão Preto, São Paulo. **Métodos:** Se desarrolló un estudio transversal y analítico realizado entre mayo y diciembre de 2014 con una muestra seleccionada por conveniencia formada de cinco escuelas del estado y cinco escuelas privadas de la enseñanza básica. En cada una de las escuelas se aplicó al responsable de la cafetería un cuestionario estructurado con una lista de alimentos y bebidas y las variables relacionadas a la implantación de una cafetería saludable. La clasificación de los alimentos en saludables y no saludables estuvo basado en los documentos “Los 10 pasos para la Promoción de la Alimentación Saludable de las Escuelas”, del Ministerio de la Salud y de la Portaria del Estado de São Paulo sobre el comercio de alimentos saludables en el ambiente de la escuela. Se utilizó un análisis descriptivo para el tratamiento de los datos. **Resultados:** Se observó en las escuelas privadas mayor apoyo del profesional de Nutrición, disponibilidad de materiales educativos, anuncios de productos industrializados y mayor número de opciones de alimentos saludables (81,7%). En las escuelas públicas se verificó la restricción para determinados alimentos no saludables pero pocas opciones de alimentos saludables (25,0%); sin embargo, hubo mayor participación de los cantineros en actividades de educación nutricional y conocimiento de la legislación específica. Se identificó la falta de interés de los padres y alumnos como limitación para la instalación y el funcionamiento de la cafetería saludable en las escuelas. **Conclusión:** Las cafeterías públicas y privadas investigadas no seguían en la íntegra las recomendaciones del Ministerio de la Salud y de la Portaria del Estado de São Paulo sobre el comercio de alimentos saludables en el ambiente de la escuela pues ofrecían alimentos considerados no saludables. Además, las escuelas privadas ofrecen más opciones de alimentos saludables y no saludables para los alumnos.

Descritores: Alimentación; Alimentación Escolar; Legislação Sobre Alimentos.

INTRODUCTION

The growing modernization and urbanization in Brazil has brought many changes in people's lifestyle, including changes in eating patterns^(1,2). The *Pesquisa de Orçamento Familiar* (Consumer Expenditure Survey), conducted by the Brazilian Institute of Geography and Statistics in 2008 and 2009, found in the Brazilian population aged

over 10 years a high consumption of foods such as fast-food, processed snacks, sweets and soft drinks, which were associated with high intakes of energy, sugar, sodium and saturated fat. In addition, the survey also found a reduction in the consumption of micronutrients and fiber. This eating pattern is directly related to the increase in childhood obesity and the development of chronic diseases such as diabetes mellitus and cardiovascular disease⁽³⁾.

As childhood is the period of life in which food preferences are established, it is the right time for health promotion and consolidation of healthy habits⁽¹⁾. School is a learning environment where children and adolescents spend much of their day. Therefore, it is also an appropriate environment for the implementation of healthy eating strategies^(2,4,5).

Promoting healthy habits in schools should involve the participation of various agents, such as students, teachers, coordinators, canteen owners and parents or guardians through joint actions to achieve a comprehensive and multidisciplinary vision of the human being in order to prevent risk behaviors in all educational opportunities. School canteens may be important educational environments to encourage consumption of healthy foods. However, encouraging the change in the school environment and, consequently, the adoption of healthy eating habits by children requires the training of everyone involved^(2,6,7).

In Brazil, school canteens are present in 48.9% of schools, with a higher prevalence among private institutions (94.8%). Although to a lesser extent, 39.4% of public schools also have canteens⁽⁸⁾.

In this context, in 2006, the Ministries of Education and Health, through the Interministerial Ordinance No. 1.010⁽⁹⁾, established, at the national level, guidelines to promote healthy eating in public and private schools from early childhood to primary and secondary education. These guidelines suggest strategies for the adoption of the 10 steps to healthy eating through a continuous process of education and monitoring of the nutritional status of students^(10,11). It also includes the need for family-school integration in this process and the training of professionals (health, education, school cafeteria and canteen workers, school feeding counselors). Another point is the restriction of supply and sale of foods high in saturated fat, trans fat, free sugar and salt⁽⁹⁻¹¹⁾.

The document prepared by the Ministries of Health and Education, called “*Os 10 Passos para a Promoção da Alimentação Saudável nas Escolas*”⁽⁵⁾ (The 10 Steps to Promoting Healthy Eating in Schools), aims to promote health in the school environment and increase adherence of schools to healthy eating habits. According to the document, there should be restrictions on the supply of foods classified as unhealthy. They include: candies;

lollipops; chewing gums; cookies, especially the stuffed ones; soft drinks; artificial or sweetened juices; fried foods such as rissole, *pastel* and *coxinha*; mayonnaise; savory snacks filled with sausages and ham; packed snacks and industrialized popcorn^(5,12,13). The restriction on the supply of sweets and sweet preparations in the *Programa Nacional de Alimentação Escolar – PNAE* (National School Feeding Program) is supported by the law and should be the basis for maintaining an environment conducive to healthy eating in school canteens⁽¹³⁾.

In Brazil, the state of Santa Catarina is a pioneer in the determination of specific legislation on the marketing of foods and beverages in the school environment^(13,14). In São Paulo, the city of Ribeirão Preto published in 2002 a resolution that defined a list of foods forbidden for consumption at schools belonging to the municipal school system. Additionally, although there is no current state law, a state decree published in 2005 provides standards for the operation of school canteens⁽¹⁵⁾. One of its articles stands out:

Article 8 - the marketing of the following foods is permitted aiming at the acquisition of healthy eating habits to improve quality of life: I- fruits and vegetables; II- sandwiches, bread, cakes, pies and natural or baked savory snacks and sweets: open or closed esfihas, baked 'coxinhas' and rissoles, potato bread, 'enroladinho', tarts, quiche, baked focaccia, among other similar products; III- fiber-based products: cereal bars, breakfast cereals, brown rice, bread, cakes, pies, cookies; IV- chocolate bars below 30g or mixed with fruit and fiber; V- natural or fruit pulp juice; VI- dairy beverages: chocolate, strawberry, coconut, cappuccino, oatmeal and fruit smooth flavors, and other similar products; VII- beverages or foods derived from extracts or fermented (soy, milk, etc.).

However, research shows that food sold in these places are high in energy, sugars, fats and salt, and point to the need to change this reality^(1,10).

Despite the efforts, it is known that awareness is not an immediate process. Therefore, continuous and efficient actions are necessary⁽¹¹⁾. In this sense, the aim of the present study was to evaluate the types of products sold in school canteens of the municipality of Ribeirão Preto, São Paulo.

METHODS

This is an analytical cross-sectional study carried out from May to December 2014. The sample was selected by convenience and consists of five public and private primary schools of Ribeirão Preto, São Paulo.

Schools were selected through the following inclusion criteria: they should have a canteen and serve a minimum

of 50 students from the first to eighth grade (8-year length primary school system) or from the first to ninth grade (9-year length primary school system). In 2014, there were 61 public primary schools in the city of Ribeirão Preto according to the Educational Board of the Ribeirão Preto region. Of these, 32 schools did not meet the inclusion criteria, 18 schools could not be contacted because of the unavailability of the people in charge of the institutions and 6 refused to participate in the study.

The selection of private educational institutions was based on an internet search that identified 16 private primary schools, 5 of which did not meet the inclusion criteria, 4 of them did not respond to the contact made with the heads of schools and 2 did not agree to participate. Primary schools of the municipal school system were not included in the study due to the closure of all the canteens in these schools. Therefore, the study included 10 schools: 5 public and 5 private.

Data were collected using a structured questionnaire in each school (n=10) applied to the people in charge of the school canteens. The instrument contained a list of foods and beverages and also covered information about the operation of the canteen, the involvement of school administration, daily availability of fruits and educational materials, the existence of advertisements of processed foods and food education activities for canteen workers, difficulties to implement a healthy canteen and canteen workers' knowledge of legislation on the products sold within schools.

The classification of foods into healthy and unhealthy was based on documents that indicate the restriction or permission for their marketing in school canteens. The document by the Ministry of Health "The 10 Steps to Promoting Healthy Eating in Schools" points out the foods whose marketing in canteens is restricted (candies, lollipops, chewing gums, cookies, especially the stuffed ones, soft drinks, artificial or sweetened juices, fried foods, mayonnaise, savory snacks filled with sausages and ham, packed snacks, industrialized popcorn and other similar products)⁽⁵⁾. The list of permitted foods and beverages was based on the COGSP/CEI/DSE Joint Ordinance of 23 March 2005, of the state of São Paulo (fruit, sandwiches, bread, cakes, pies, natural or baked savory snacks and sweets, fiber-based products such as cereal bars, breakfast cereals, bread, cakes, pies, cookies, natural or fruit pulp juice, dairy beverages, beverages or foods derived from extracts or fermented soy and milk)⁽¹⁵⁾.

Data were analyzed using descriptive statistics and presented through relative frequencies of occurrences of variables in school canteens.

The study was authorized by the Board of Education of the state of São Paulo and the private schools selected. The Research Ethics Committee of the *Centro de Saúde Escola da Faculdade de Medicina de Ribeirão Preto da Universidade de São Paulo* (Health Center of Ribeirão Preto Medical School of the University of São Paulo) approved the research project (Opinion CEP/CSE-FMRP-USP No. 706.217), and those in charge of school canteens signed the Free Informed Consent Form.

RESULTS

All the schools canteens evaluated offered healthy and unhealthy products according to the legislation. Canteens of private schools offered 81.7% of the healthy items evaluated, while only 25.0% of these same items were available in canteens of public schools. With regard to unhealthy foods, it was observed that 53.84% and 41.5% of the options were available in the canteens of private and public schools, respectively.

Unhealthy foods sold in all the canteens of private schools included artificial juice, soft drinks, and savory snacks with ham and sausage. In canteens of public schools, it was found that all of them sold savory snacks with sausage and candies. A large number of canteens also sold artificial juice and savory snacks with ham (Figure 1).

It is important to note that all the canteens of the public schools analyzed posed restrictions on the sale of stuffed cookies, chewing gums, mayonnaise, soft drinks and fried savory snacks. Among the foods identified as healthy, it was found that all the canteens of private schools had fresh fruit, yogurt, fruit salad, baked savory snacks and wholesome sandwiches. When compared to the canteens of public schools, it was observed that the baked savory snacks were the only healthy products present in all schools and that none of the canteens in public schools analyzed had soy and milk beverages, breakfast cereals, fresh fruits and fruit salad (Figure 2).

Regarding the behavior of canteen workers and the school board, there was, in public schools, greater intervention by the school board through restrictions on the advertising and sale of certain products, knowledge of the legislation and participation of canteen workers in nutrition education activities; however, they do not offer fruit in the canteen. In private schools, the dissemination of educational material on healthy eating and the availability of at least one fruit in the canteen should be highlighted compared to public schools. Regarding the main difficulties for the implementation of a healthy canteen, canteen workers reported, in private schools, the lack of interest of parents/guardians and, in public schools, financial difficulties and the lack of interest of the children (Table I).

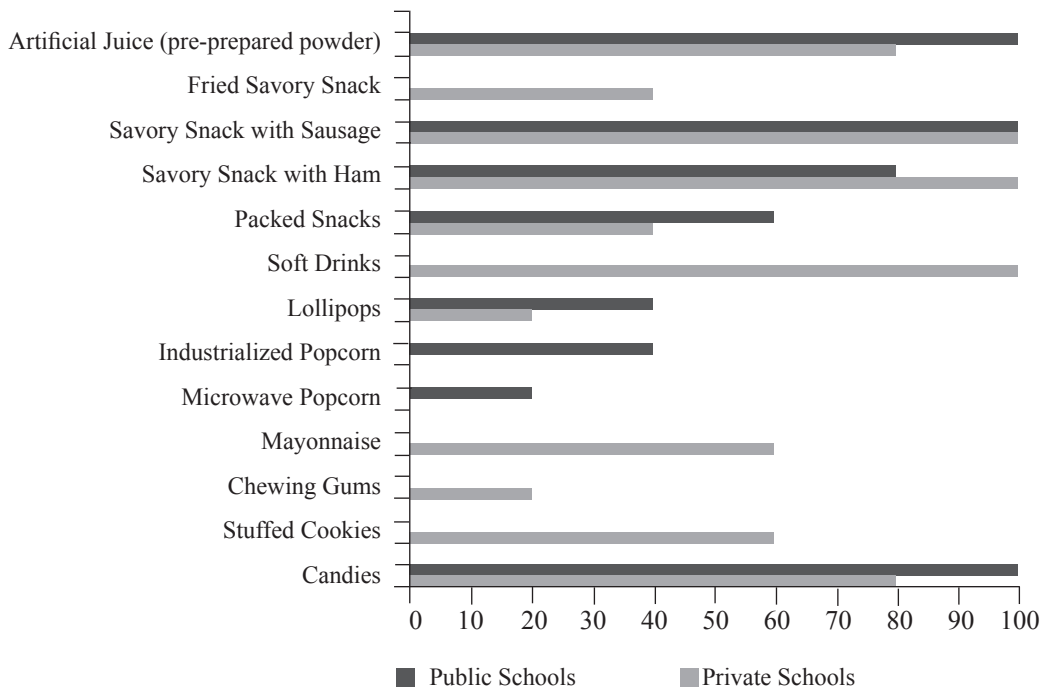


Figure 1 - Percentage distribution of unhealthy foods sold in public and private school canteens. Ribeirão Preto, São Paulo, 2014.

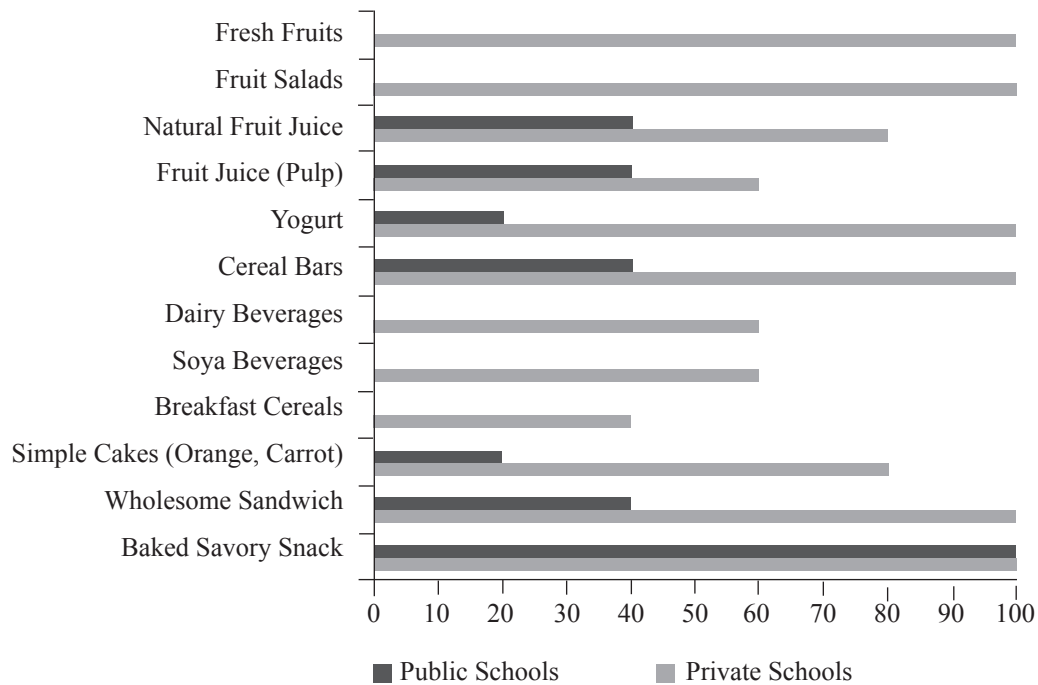


Figure 2 - Percentage distribution of healthy foods sold in public and private school canteens. Ribeirão Preto, São Paulo, 2014.

Tabela I - Percentage distribution of variables evaluated among canteen workers of public and private school. Ribeirão Preto, São Paulo, 2014.

Variables	Public (%)	Private (%)
Receives support from a Nutrition professional	60	80
Availability of educational material on healthy eating	0	60
Has recommendations and/or restrictions proposed by the school board	100	80
School conducts nutrition education activities with canteen workers	100	20
Knows the legislation on the products sold in the canteens	100	60
Advertising of processed foods	20	80
Difficulties for the implementation of a healthy canteen:		
Lack of interest of fathers/guardians	20	100
Financial difficulties	40	20
Lack of interest of children	60	20
Competition with school meals	20	0
Sees no need to change	20	0
Variety of fruits offered in the canteens daily:		
None	100	0
One	0	20
Two or more	0	80

DISCUSSION

School canteens, both in public and private schools, are not entirely suited to the restrictions on the marketing of unhealthy foods as highlighted by the Ministry of Health document "The 10 Steps to Promoting Healthy Eating in Schools"⁽⁵⁾. The school environment is a suitable space for the promotion of health and development of healthy habits^(7,9,10), and proper nutrition should be encouraged in all collective spaces, either through the actions of teachers/educators during lessons⁽¹⁶⁾ or in sports and recreational activities, promoting the creation of environments conducive to the adoption and maintenance of healthy behaviors^(2,17).

By sharing the responsibility to build healthy lifestyles, schools should encourage the training of educators and other professionals and also pose restrictions on the sale of foods high in saturated fat, trans fat, free sugar and salt and encourage the consumption of fruits and vegetables^(2,5).

From this perspective, it was found that in private schools there is a greater availability of healthy foods (fruits, fruit salad, milk and soy beverages), according to recommendations of the COGSP/CEI/DSE⁽¹⁵⁾ Joint Ordinance of the Government of the state of São Paulo; however, there is also a greater availability of unhealthy foods (stuffed cookies, chewing gums, mayonnaise, soft drinks and fried savory snacks), products which are not found in the canteens of the public schools evaluated. Studies in Santa Catarina and the Federal District also reported greater availability of healthy foods (fruits, fruit salads, dairy products, sandwiches and juices) in private schools^(11,17).

In a study that evaluated eight municipalities of Santa Catarina after the implementation of the state law on canteens, there was a greater chance (3.22 times) of the school board of private schools limiting or suggesting the products sold in their canteens when compared to public schools⁽⁴⁾. However, in the present study, there was a higher proportion of restrictions or recommendations posed by the school board in public school canteens, but both private and public institutions reported following recommendations of the school board. The main limitations imposed relate to the sale of soft drinks and fried savory snacks.

Restricting these products rich in sugars and fats is a positive strategy for health promotion at school and is supported by the municipal law of some localities in the country⁽¹⁸⁾. However, the sale of many products with low nutritional value (candies, packed snacks, artificial juice, savory snack with ham and sausage) is still a reality in the school universe.

In the present study, most of the canteens of private schools also presented restrictions, especially with regard to fried foods and packed snack. In addition to restrictions, the school board also encouraged the daily offer of healthy products such as natural juice⁽¹⁵⁾.

Canteen workers of public schools reported knowing regulatory measures for the products sold and participated in nutrition education activities promoted by the school. It is noteworthy that enlightened and knowledgeable professionals can become active subjects in the development of healthy habits among children⁽¹⁾ and have an impact on the reduction of the supply of foods high in saturated and hydrogenated fats⁽¹⁹⁾.

The advertising of processed foods was more common in private schools and was usually associated with the availability of these products in the canteen, being displayed on the equipment used for the conservation of these foods (refrigerators for soft drinks and ice cream).

Despite the existing standards and recommendations, there is still great resistance to make canteens allies in the development of good eating habits. Financial issues related to economic returns, little involvement of the school community and the low acceptance of students are identified as the main obstacles to implementing a healthy canteen⁽²⁰⁾, corroborating the observations of canteen workers who pointed out the lack of interest of parents and children as one of the main challenges to be overcome, both in public and private schools. Thus, it is up to the school to play a dual role as a health educator: the inclusion of healthy eating issues in the political and pedagogical project of the school and the addressing of families, highlighting the shared responsibility for maintaining the health of students^(2,7,9,21).

Nutrition education activities have a positive impact on the food choices of children and adolescents; however, if carried out in isolation and in a timely manner, they become ineffective to reflect permanent changes in eating habits⁽²²⁾. Canteen workers' report on the quality of foods brought from home shows that actions to incorporate good eating habits should start at home. A study in Lajeado, Rio Grande do Sul showed that foods consumed at school are coming mainly from snacks brought from home (biscuits, snacks and white bread sandwiches) or purchased at the school (soft drinks, sweets, sandwich with sausage and candies)⁽²³⁾.

Thus, it is of utmost importance that parents or guardians understand healthy eating as a factor for health promotion and disease prevention through offering healthy options for home-brought snacks and also through guidance to children on food choices, making efforts for an appropriate nutrition.

In public and private schools, financial resources appeared as a major limitation for the implementation of healthy canteens, as the sale of healthy foods is low and does not provide profit. Still, in public institutions, there was a canteen disclaimer in offering healthy foods justified by the availability of these foods in the *Programa Nacional de Alimentação Escolar – PNAE* (National School Feeding Program). However, the quality of food provided by the program in public schools does not guarantee the compliance of the students, and the presence of food places in the school environment can discourage the consumption of healthy food offered for free⁽²³⁻²⁵⁾.

Thus, the contradiction of the school's role of developing healthy eating habits and the reality of offering unhealthy foods at school are perpetuated^(9,10).

Reflection should also be made on the attitude of canteen workers, which is contradictory to the COGSP/CEI/DSE Joint Ordinance of 2005, which recommends that school canteens follow the PNAE for the development of healthy eating habits in children^(15,21).

The lack of specific legislation at the national level on the sale of foods in school canteens is still an important challenge to be overcome. However, the regulatory measures need the support from various sectors to promote real dietary changes to be incorporated and emphasized in public policies.

Therefore, the establishment of standards or the implementation of legislation on products sold in canteens is not enough to encourage the adoption of healthy habits. The adoption of regulatory measures and supervision⁽¹⁸⁾ should be concurrent with the promotion of nutrition education activities for parents, students, education professionals and canteen workers aimed at raising awareness and risk behavior modification^(10,21). In this sense, intersectoral work plays a fundamental role as it encourages collective action among the various sectors and society^(7,10,26).

It is worth noting the experience of one of the private school canteens evaluated in this study, which through nutrition education and financial incentives could encourage more than half of the students to replace the consumption of soft drinks by natural juice. In this canteen, one of the simple actions proposed by the nutritionist in charge included the training of canteen workers to offer healthy food to students at a lower cost than that of the unhealthy food. This action aimed primarily to convert consumers and subsequently exclude sweetened beverages from the canteen, adapting to the rules for healthy eating promotion in the school environment.

Limitations of the present study include its sample size, which comprised only 5 schools in each category, and the high number of schools that did not respond to

contact requests or refused to participate in the study, a condition that can result from a lack of knowledge about the importance of the subject or the specific legislation.

CONCLUSION

The canteens evaluated, both in public and private schools, did not fully follow the recommendations of the Ministry of Health and the São Paulo State Ordinance on the sale of unhealthy foods at school as they offered foods considered unhealthy. In addition, private schools offer more food choices – both healthy and unhealthy – to their students.

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