



PROMOTION OF FRUIT AND VEGETABLE CONSUMPTION IN ADOLESCENTS: CASE STUDIES

PROMOÇÃO DO CONSUMO DE FRUTAS E VERDURAS EM ADOLESCENTES: RELATO DE EXPERIÊNCIA

PROMOCIÓN DEL CONSUMO DE FRUTAS Y HORTALIZAS EN ADOLESCENTES: ESTUDIOS DE CASO

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ABSTRACT

Objective: to report the experience in the focus of nutritional education for adolescents, aimed at promoting the consumption of fruits and vegetables. **Method:** a descriptive study, type case studies, experienced in 2012, with 24 adolescents from a public school in Montes Claros, Minas Gerais/Southeastern Brazil. The activities took place in two phases: the first phase consisted of nutritional diagnosis and the second in conducting the activities of nutritional intervention. This study was approved by the Research Ethics Committee, case No. 0292. **Results:** an anthropometric analysis showed prevalence of 8,3 % of overweight and 12,5 % of obesity among teenagers. it was found that most teenagers consumed once a week fruits (41,7%) and vegetables (45,8%). In relation to feeding behavior there was prevalence in the pre contemplation stage, for fruit (58,3%) and vegetables (37,5%) consumption. **Conclusion:** intervention activities can be carried promising to change the food habits of adolescents and promote health. It is suggested that the improvement of future interventions, targeting the continuation of this research. **Descriptors:** Adolescent; Feeding Behavior; Nutritional Intervention.

RESUMO

Objetivo: relatar a experiência no enfoque da educação nutricional para adolescentes, voltada à promoção do consumo de frutas e verduras. **Método:** estudo descritivo, tipo relato de experiência, vivenciado em 2012, com 24 adolescentes de uma escola pública municipal de Montes Claros, MG/Sudeste do Brasil. As atividades ocorreram em duas fases: a primeira consistiu no diagnóstico nutricional e a segunda na realização das atividades de intervenção nutricional. Esse estudo foi aprovado pelo Comitê de Ética em Pesquisa, Processo nº 0292. **Resultados:** a análise antropométrica evidenciou prevalência de 8,3% de sobrepeso e 12,5% de obesidade entre os adolescentes. Constatou-se que a maioria dos adolescentes consumia uma vez por semana frutas (41,7%) e verduras (45,8%). Em relação ao comportamento alimentar houve prevalência no estágio em pré-contemplação, para consumo de frutas 58,3% e verduras 37,5%. **Conclusão:** as atividades de intervenção realizadas podem ser promissoras para a mudança do hábito alimentar dos adolescentes e promover a saúde. Sugere-se o aprimoramento de futuras intervenções, direcionando a continuidade desta investigação. **Descritores:** Adolescente; Comportamento Alimentar; Intervenção Nutricional.

RESUMEN

Objetivo: presentar la experiencia en el enfoque de la educación nutricional de los adolescentes, destinado a promover el consumo de frutas y verduras. **Método:** estudio descriptivo, de tipo estudios de caso, experimentado en 2012, con 24 adolescentes de una escuela pública en Montes Claros, Minas Gerais/ Sureste de Brasil. Las actividades se llevaron a cabo en dos fases: la primera fase consistió en el diagnóstico nutricional y la segunda en la realización de las actividades de intervención nutricional. Este estudio fue aprobado por el Comité de Ética en Investigación, caso nº 0292. **Resultados:** el análisis antropométrico mostró prevalencia de 8,3 % de exceso de peso y 12,5% de obesidad entre los adolescentes. Se encontró que la mayoría de los adolescentes consumen una vez a la semana frutas (41,7%) y hortalizas (45,8%). En relación al comportamiento de alimentación era frecuente en la etapa de pre-contemplación, para el consumo de frutas (58,3 %) y hortalizas (37,5%). **Conclusión:** las actividades de intervención realizadas pueden ser promisoras para el cambio de los hábitos alimenticios de los adolescentes y promover la salud. Se sugiere la mejora de las intervenciones futuras, apuntando a la continuación de esta investigación. **Descritores:** Adolescentes; La Conducta Alimentaria; La Intervención Nutricional.

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INTRODUCTION

Promote the consumption of fruits and vegetables is one of the main items of the "Global Strategy for the Prevention of Chronic Diseases" of the World Health Organization. There is scientific evidence that regular consumption of these foods in adequate quantities is associated with decreased risk of mortality and reducing the occurrence of chronic diseases such as cardiovascular disease, some cancers, diabetes and obesity, in addition to preventing micronutrient deficiencies particularly important in developing countries.¹

The teenage population has undergone changes in your eating habits that have decreased the consumption of cereals and vegetables (fruits and vegetables) while in that these bad habits have greatly increased food rich in fats and sugars with high energy density. This phenomenon, called the nutrition transition, leads to increase in the prevalence of obesity is considered an epidemic.² Adolescents are a nutritionally vulnerable group, considering their increased nutritional needs, their eating pattern and lifestyle, and susceptibility to environmental influences.³

Results from the World Health Survey, conducted in 2002/03 on the initiative of WHO¹, revealed that 78% of adolescents between 10 and 19 years old had a low intake of fruits and vegetables (less than 400g) in underdeveloped or developing countries. Teens prioritize and tend to live in the moment, not worrying about the consequences of their eating habits in the long term.⁴

Therefore, we believe that access to information on food and nutrition monitoring and food intake are important for the identification of risky behavior, as well as to ensure the full potential of growth and development of adolescents.³

Between spaces to promote healthy eating in adolescence, the school is considered privileged, and education and health can have a major impact in this environment. At school, where young people spend much of their day, to share guidance for health promotion is fundamental. It is also at school that many students eat their meals, making choices that reveal their preferences and eating habits.⁵

Promoting healthy eating among adolescents in the school environment has been identified as a strategic measure also due to the recent expansion of school coverage for this age group in the country,

providing, so access to this population within the school environment. Although profuse in other countries and can contribute substantially to the understanding of causes and scenarios of power adolescent and school policies support nutrition education and food, in Brazil there is a significant lack of behavioral studies on eating habits of people in this age group.⁶

It is believed that the main factors that modulate feeding behavior are essential for the adaptation of theories that may justify the intervention, as well as for the development of educational materials. These are components of the learning process that facilitates the production of knowledge when adopted in a participatory and interactive. Thus, the aim of this study is to relate an experience in the focus of nutrition education for adolescents, aimed at promoting the consumption of fruits and vegetables.

METHODOLOGY

This is a descriptive study, of reporting experience type, developed during the second half of 2012, for academic nutrition with adolescents of both genders, aged 11 to 13 years old, enrolled in the sixth year of a school from Montes Claros, Brazil.

This study was conducted in accordance with the ethical principles of Resolution 196/96 (BRAZIL, 1996) and approved by the Research Ethics Committee (REC) of the Educational Association of Brazil-SOEBRAS (Case nº 0292, on 2nd April, 2012).

The experience was characterized by an educational nutrition and feeding action among adolescents, divided into two phases: nutritional diagnosis and educational intervention.

♦ Phase 1

For implementation of activities was held the first meeting with the school board in order to present the project proposal to promote the consumption of fruits and vegetables among adolescents. Then were asked teachers and teenagers to sensitize them about the importance of the project and invite them to participate.

The adherence of adolescents in the study was spontaneous, and among those who had expressed interest and signed the Informed Consent Form (ICF) of the parents/guardians, was initially performed the nutritional diagnosis. The first step in the planning of the intervention is to identify the target group, lift the recurrent needs and potential problems of the group, without forgetting the regional, cultural, social, environmental and

psychological tasks those are closely related to the feeding of people.⁷

To define the nutritional status was considered the parameter height and weight, and anthropometric measurements obtained by a trained examiner. Weight was measured on a digital scale TANITA® brand, with a capacity of 150Kg. The height measurement was through stadiometer EXACT TIME® brand. The nutritional status assessment was performed using the Body Mass Index for Age (BMI/A) and classified according to the parameters of WHO⁸ that defines underweight when the BMI/percentile is ≤ 5 , eutrophic between 5-85 percentile, risk of overweight between 85-95 percentile and overweight when the percentile is ≥ 95 .

In the analysis of food consumption of adolescents, we found the number of meals daily and the habit of eating fruits and vegetables. The frequency of consumption of fruits and vegetables was assessed by means of a list containing the names of the food accompanied by the frequency of consumption: 1 time per week/rarely, 2 times per week, 3 or 4 times a week, 5 times a week and 7 or more times per week. Then we calculated the average consumption of daily servings of fruits as well as vegetables, and compared to the Food Guide Pyramid recommendations.⁹ It was suggested as adequate the consumption 4-5 daily servings of vegetables and 3-5 daily servings fruits.

For analysis of feeding behavior in relation to fruit and vegetables, a questionnaire was applied based on the Transtheoretical Model, in order to classify the five stages of behavior change: pre-contemplation, contemplation, decision, action, maintenance. This classification was performed independently for each of the food groups studied.¹⁰

♦ Phase 2

The intervention phase consisted in the implementation of educational activities in a group of adolescents with a maximum of eight students in three weeks in the school environment. The activities were developed based on the results of diagnosis developed in phase 1.

In the first week, for each group of teenagers, was applied the film "Nutriamigos", in the audiovisual room school with a duration of 44 minutes. It is a nutritional education program specially developed for the purpose of awareness and motivation for initiating changes in eating behavior. After the video there was performed a moment of discussion with the teens. Information worked emphasized the consumption of fruit in time

for snacks, encouraging the exchange of foods-like cookie filled, artificial juices, soft drinks, popcorn and other unhealthy foods-fruits, natural juices and sandwiches prepared at home among other healthier foods. They emphasized the importance of the consumption of vegetables in the main meals (lunch and dinner).¹¹

The second week was held the "Dynamics of Cards' five, lasting 30 minutes, carried out in the classroom with students. The activity consisted in distributing cards to teenagers in the colors green and red. Green card in adolescents should list your food preferences and aversions red card, considering the group of fruits and vegetables. Then the cards were collected, randomly arranged by color and food presented by the adolescents was discussed. On occasion were oriented about the importance of eating fruits and vegetables regardless of food preference and importance of these foods in combating certain diseases.⁹

In the third week the adolescents were invited to a reunion with tasting "fruit salad" in order to encourage the consumption of fruit in group. During distribution the researchers involved have clarified about the benefits of fruit salad for food. The fruits contain nutrients essential to health, such as vitamins, minerals, and fiber that help reduce the risk of many diseases.⁹

RESULTS AND DISCUSSION

Participated in educational activities 24 adolescents, 50% were female. In the analysis of the nutritional status of adolescents showed that 4,20% were malnourished, 75% eutrophic, 8,3% overweight and 12,5 % obese. There is a trend of increasing prevalence of overweight and reduce the occurrence of low birth weight among adolescents, as reported in population studies with Brazilian adolescents.¹² In the analysis of the nutritional status of adolescents in public schools in São Paulo was identified that 4,4 % of participants with low weight, while 21% of the sample had some degree of overweight.¹³

The increasing prevalence of obesity has been observed worldwide, due to changes in lifestyle and eating habits, both in developed and in developing countries, why is being considered a chronic and epidemic. Obesity is also growing strongly in childhood and adolescence, and tends to persist into adulthood.¹⁴

In the analysis of food consumption of adolescents found that 79% were on average three meals a day, with meals more frequently were the snacks and lunch. Indeed,

it was found inadequate food for the number of meals eaten daily by the participants in this study, especially the omission of breakfast. The current dietary recommendations for the Brazilian population determine that make six meals daily, as follows: breakfast, morning snack, lunch, afternoon snack, dinner, and evening snack.⁹

Figure 1 shows the percentage distribution of frequency of consumption of fruits and vegetables in the study group. It was observed that most teenagers consumed fruits and vegetables once per week (41,7% to 45,8% for fruit and vegetables). The consumption considered appropriate 5 times per week or more and 7 times per week was reported by approximately 20% of adolescents.

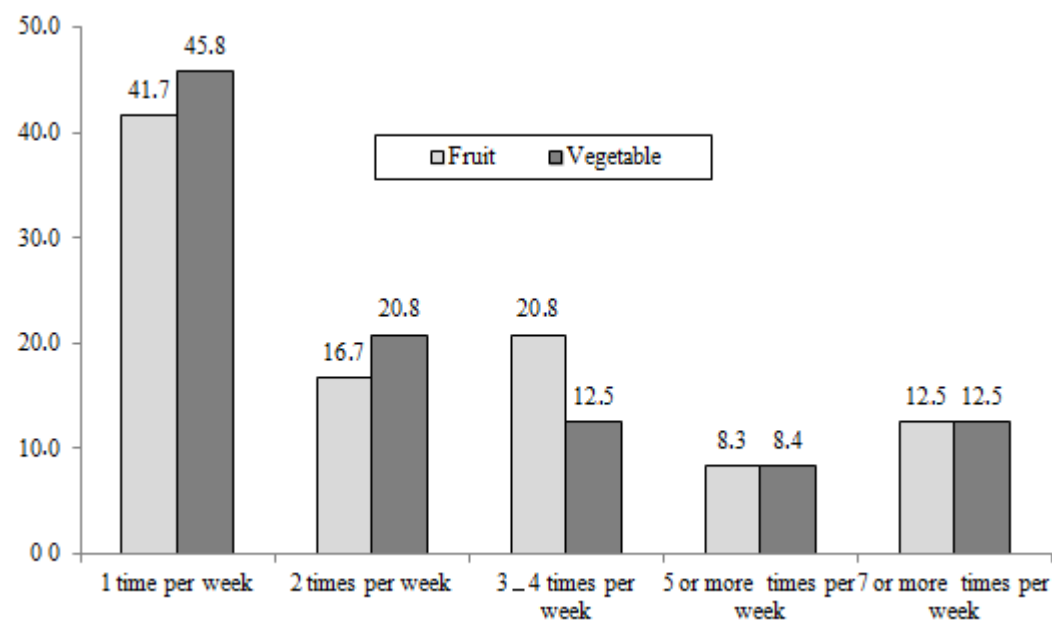


Figure 1. Percentage distribution of consumption of fruits and vegetables by teenagers in a public school. Montes Claros, MG, 2012.

The Food Guide for the Brazilian population recommends daily consumption of fruits and vegetables, and yet there is an inadequate intake in half of adolescents participating in this study. There is evidence of regular consumption of a minimum amount of 400g/day of fruits and vegetables with lower risk of developing many chronic diseases and maintaining proper weight. However, to meet this amount of increase in consumption means at least three times the average current consumption of the population.⁹

In another study¹³ was also observed a low consumption of fruits and vegetables in adolescents, as recommended by the food pyramid, 12,4% and 10,3% respectively. The consumption of less than one serving

represented 50% compared to the consumption of fruits and vegetables to 38,9%.

The classification of adolescents, according to the stage of change of eating behavior in relation to the consumption of fruits and vegetables is illustrated in Figure 2. The data revealed that most teens find themselves in the three first stage of feeding behavior (pre-contemplation, contemplation and decision).

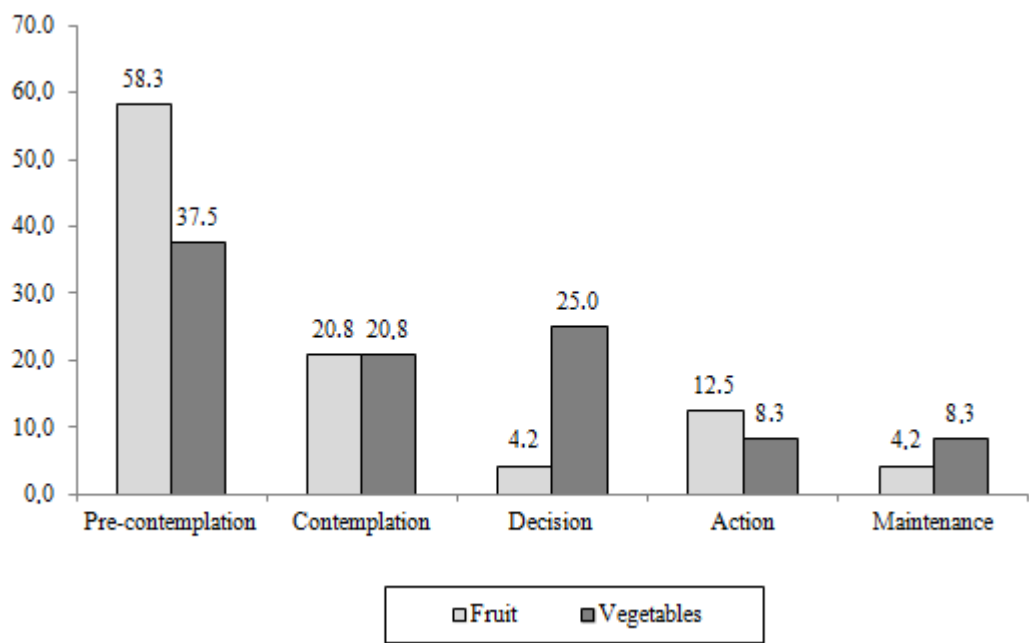


Figure 2. Percentage distribution of the adolescents interviewed according to the stages of change of feeding behavior in relation to the consumption of fruits and vegetables. Montes Claros, MG, 2012.

The diagnosis of fruit and vegetables and the stages of behavior change justify the use of the proposed model, in addition to having demonstrated fundamental data for a better understanding of eating behavior of adolescents. Individuals in the precontemplation stage diagnosed in this study, should be subjected to intervention activities guided by approaches that show the importance of a healthy diet. Accordingly, it is suggested that the proposed strategy to adolescents from a public school in Montes Claros, can provide knowledge needed for decision making, to adopt attitudes, habits and practices varied and healthy food. Therefore it is considered essential to addressing the food and nutrition problems found nowadays for this age group.

Proposals for nutritional interventions more effective and lasting should include, preferably, a construct specific, contextualized by feeding behavior, habits and food consumption; beyond the nutritional state.¹⁵ Educational action referenced in this study was designed based on the results of the nutritional assessment prior adolescents, which is considered an essential activity for nutritional intervention. Prior knowledge of the population allows mapping protocols to better define the instruments used in the promotion of healthy eating habits.⁷⁻¹⁵

The educational activities of this study were always a concern to bring a language accessible and relevant to the social context of adolescents and relate the content to the daily routine, aiming to improve adherence to the intervention on the part of individuals.

Nutritional intervention strategies with adolescents, especially adolescent overweight, can result in satisfactory results

in encouraging healthy nutritional habits such as consumption of fruits and vegetables.¹⁶

The proposed intervention was carried out in a short space of time in which the present study showed no impact on the consumption of fruits and vegetables and the components of the transtheoretical model at the end of the educational activities. It is recognized that these strategies should be implemented continuously, and therefore, it is suggested that other designs in the long term, based on the methodology presented, be investigated further.

FINAL REMARKS

The experience report was shown to be promising as an educational strategy in the context of promoting healthy eating through consumption of fruits and vegetables among adolescents in the school environment. It is noteworthy, however, the need for continuity and expansion of the proposed intervention, including many teenagers and favoring the integration of other social actors.

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