

## Are textbooks tools for food and nutrition education?

### *Livros didáticos são ferramentas para educação alimentar e nutricional?*

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#### Keywords

Food and Nutrition Education  
Textbooks  
Elementary School

**Objective:** To examine whether and how Food and Nutrition Education (FNE) is addressed in textbooks adopted in elementary school of the municipal network of a city of Minas Gerais. **Methods:** Descriptive study on the analysis of textbooks. It was carried out using an instrument specially designed for this purpose. Was evaluated the presence of information about nutrition, feeding, food, and nutrients that was clearly related to FNE. All information identified was categorized according to its scope and concept considering the FNE Reference Framework. **Results:** A total of 70 books totaling 2.918 pages were evaluated. Of these pages, 230 (8.2%) had texts, illustrations or activities with obvious intent to work FNE pedagogically. The sciences books (51.3%) were the ones that presented most this theme. The highest proportion referred to food as a factor of protection or risk to health, and food in a approach of hygiene and food safety. **Conclusion:** The elementary school textbooks evaluated were ineffective in significantly and actively including FNE in a way to interact with the student, arouse his curiosity on the theme and understand it in its multiple dimensions, beyond to the biological aspects of feed. Thus, in choosing the books that will be adopted in schools, it is also important to evaluate if they are FNE tools and consequently, if they provide knowledge and discussions that stimulate of healthy eating habits in the child and youth group, in the school environment.

#### Palavras-chave

Educação Alimentar e Nutricional  
Livros didáticos  
Ensino fundamental

**Objetivo:** Examinar se e como a Educação Alimentar e Nutricional (EAN) é abordada nos livros didáticos adotados no ensino fundamental I da rede municipal de uma cidade mineira. **Métodos:** Trata-se de um estudo descritivo da análise dos livros. Para esta análise foi utilizado um instrumento construído especialmente para este fim. Foi avaliada a presença de informações relacionadas à nutrição, alimentação, alimentos e nutrientes que tinham relação evidente com EAN. As informações identificadas foram categorizadas segundo a abrangência de seu conceito, considerando o Marco de Referência de EAN. **Resultados:** Foram avaliados 70 livros, totalizando 2.918 páginas, dentre as quais, 230 (8,2%) tinham textos, ilustrações ou atividades com intenção de trabalhar pedagogicamente EAN. Os livros de ciências (51,3%) foram os que mais apresentaram essa temática. A maior proporção se referia à alimentação como fator de proteção ou risco à saúde ou numa abordagem de higiene e alimento seguro. **Conclusão:** Os livros avaliados se mostraram pouco eficazes em abordar EAN de forma interativa com o aluno, despertando sua curiosidade sobre o tema. Além disso, os livros não abordavam a EAN em suas múltiplas dimensões, para além dos aspectos biológicos da alimentação. Assim, ao escolher os livros que serão adotados nas escolas é importante avaliar se esses são ferramentas adequadas de EAN e se, conseqüentemente, proporcionam conhecimento e discussões capazes de promover alimentação saudável no grupo infantojuvenil no ambiente escolar.

## INTRODUCTION

In the last decades, Brazil has undergone great social transformations, which has led to changes in food

consumption and the health status of the Brazilian population<sup>1</sup>. Those changes have resulted in the reduction of poverty, malnutrition, and social exclusion, and consequently hunger and food scarcity, as well as improvements in food

access and variety. However, these changes may have caused problems related to food and nutrition, i.e., an increase in the prevalence of overweight individuals in all strata of society<sup>1,2</sup>.

The growing number of overweight people may also be related to other factors, such as influence of the media<sup>3</sup>, lower consumption of healthy foods<sup>1</sup>, lack of parental knowledge of food that should give their children<sup>4</sup>. Overweight and obesity in children and adolescents can affect growth and development patterns and may increase morbidity and mortality<sup>1</sup>.

In order to try to change this scenario, there has been an effort to include, Food and Nutrition Education - FNE in the school<sup>5-11</sup>. This is due to the fact that schools are considered an appropriate setting for the development and adoption of healthy eating practices since they are an environment in which activities focused on health education can have a significant impact<sup>11</sup>. Also, in 2014, the Ministry of Health published the Food Guide for the Brazilian Population, which is an official document that addresses the principles and recommendations of an adequate and healthy diet, setting up as an instrument to support FNE actions<sup>1</sup>, and should also be using in the school environment.

Since 1997 the Ministry of Education has included cross-cutting themes in the National Curriculum Parameters (NCP), which must be addressed in Elementary School. These themes include environment, ethics, cultural pluralism, sexual orientation, and health<sup>12</sup>. These themes are not independent disciplines; they permeate all areas of knowledge and act as a unifying axis, around which the disciplines organize themselves and should be addressed in a coordinated manner and not as a decontextualized subject in the classroom<sup>13</sup>.

FNE was recently included as a transversal theme in elementary education<sup>14</sup>, and, as mentioned above, schools plays a key role in divulging this theme. The most recent definition of FNE was published in the Brazilian Food and Nutrition Education Reference Framework for Analysis of Public Policies (MRFNE)<sup>15</sup>. This framework was developed after lengthy discussions with various sectors of society, considering different practice areas: health, education, social assistance, and food and nutritional security. This definition, as we can see below, encompasses several areas of knowledge, such as biological, cultural, social, historical, and technological areas, and it involves the entire food chain.

“Food and Nutrition Education is a field of knowledge and a continuous, permanent, transdisciplinary, intersectoral, and multiprofessional practice that aims to promote the autonomous and voluntary practice of healthy eating habits. FNE practice should use problem-posing and active

educational approaches and resources that stimulate the dialogue with individuals and population groups, considering all stages of life, all stages of the food system, and the interactions and meanings which compose the eating behavior”<sup>15</sup>(p.23).

Moreover, Resolution<sup>16</sup> No. 26 of June 17, 2013, which concerns the provision of school meals to elementary primary school students as part of the Brazilian National School Feeding Program (BNSFP), determines among other things the inclusion of FNE in teaching and learning processes. FNE should be included in the school curriculum through discussions about food and nutrition and the development of healthy lifestyle practices, from the perspective of food and nutritional security. Thus, to meet this demand, it is necessary for the textbooks to present activities that help teachers to dialogue with their students to reflect together on feeding, and especially to encourage them to adopt independent and voluntary behaviors of healthy eating habits.

In this context, the textbooks made available to public school students by the Brazilian National Textbook Program (NTP), which are widely used by both teachers and students, and should be useful tools to help teachers address FNE in schools and consequently they are promoters of adequate and healthy food. For this, the books should be adjusted according to the recent Food Guide recommendations and the MRFNE proposal. However, this movement is slow, and the books may not yet be suitable for the Guide and the MRFNE.

Considering the aspects discussed above, the present study aims to examine whether and how Food and Nutrition Education is addressed in the textbooks adopted in municipal elementary schools (grades 1-5) belonging the school district of Diamantina, MG.

## METHODS

This study is part of a larger research project titled “Development of a strategy for the training of educators focusing on promoting healthy eating among school children”, and it was approved by the Ethics Committee for research on humans of the Federal University of the Vales do Jequitinhonha and Mucuri (Protocol # 725.464).

The present study is a descriptive analysis of the presence of information and activities related to FNE that were presented in an evident manner in the textbooks. The books are those provided by the Brazilian Ministry of Education through the NTP which are adopted in municipal elementary schools in Diamantina, MG, was carried out.

In order to characterize all information and/or activities that evidently intended to address FNE in pedagogical practices, the definitions of FNE and the terminology that indicated evident intent to address it were taken into account. The definition of FNE used in this study was provided by MRFNE<sup>14</sup>. The definition of the word 'evident' was provided by online dictionary the Portuguese language<sup>17</sup> means: "adjective that characterizes something that is clear; undeniable; which is understood due to its character of certainty; clarity, visible; irrefutable".

Moreover, two essential aspects for FNE, according to Bizzo and Leder<sup>18</sup>, were also considered in this characterization, i.e., information or activities should be presented in a way that stimulate: 1) 'dialogue', [...] assuming that they used dialogic discourse and were oriented towards a coordination of actions, rather than providing information only; and 2) 'problem-posing', leading to reflection about the causes, mechanisms, and solutions to nutritional issues helping naive thinkers develop critical and creative thinking skills capable of transforming living contexts.

The choice of these two aspects mentioned above was based on Paulo Freire's liberating and progressive definition of education<sup>19</sup>. Therefore, the information or activities presented in the textbooks that evidently intend to address FNE in a pedagogical manner should stimulate the promotion of voluntary and autonomous practice of healthy eating habits in children based on the expanded concept of FNE.

The analysis of the textbooks was carried out between February 2014 and February 2016. Initially, the textbooks of different academic disciplines were collected from four municipal elementary schools (grades 1-5) in Diamantina. The teachers used those textbooks to plan lessons and activities, and the students used them during classes.

According to the school year, 12, 19, 17, 14, and 8 in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade textbooks, respectively, were evaluated. As for school subjects, 17, 16, 17, 8, and 12 Portuguese, mathematics, science, history, and geography textbooks, respectively, were evaluated.

An instrument was specifically developed for the analysis of the textbooks in this study (Frame 1). The purpose of the instrument was to examine "whether" and "how" nutrition, feeding, food, and nutrients or FNE were addressed in the textbooks. It is worth mentioning that "how" refers to the approach used to address these topics, according to the type of activity (drill and practice exercises, reflective exercises, research topics, or practical activities), and the underlying conception of teaching (mere transmission of information or evident FNE, including knowledge-building opportunities).

The instrument has two sections. The first section consists of information for the general characterization of

books. The second section is a textbook analysis, and is subdivided into four parts. In the part 1 the researcher should note information from the books according to the purpose of the study (if there are figures/images related to Nutrition, Food, Nutrients, FNE, and presence of information on these topics). In the part 2, the evaluator should check whether the items identified in the part 1 appear in a specific unit or in an articulated way to other content. Also, it should be mentioned if the information is presented with the evident intent of FNE. In the part 3, the evaluator should note in which books was identified the theme in question, the number of the categories of the information and describe what was textually found with FNE intent.

The last part is a list of 11 categories, which were established to encompass all dimensions of the expanded FNE concept provided in the MRFNE<sup>15</sup>, which are: I) Social, environmental and economic sustainability, II) Approach of the whole food system, III) Appreciation of local food culture and respect for diversity of opinions and perspectives, considering the legitimacy of different types of knowledge, IV) Development of self-care and autonomy.

Category 1 includes pictures of foods, texts, or activities that are without theoretical basis related to the subjects in question i.e., they are decontextualized and poorly illustrated. Categories 2, 3, 5, and 6 refer to information or activities that have a social and/or historical perspective of eating habits. Category 4 refers to the food production chain and categories 7-11 include information or activities concerning biological aspects of food and eating habits.

In the analysis of the books, , it was considered that categories 7, 8, 9 and 10 cover the essential points cited by Bizzo and Leder<sup>18</sup> and Freire<sup>19</sup> and, therefore, were classified with clearly intention of FNE. In categories 2, 3 and 4, this intention was not clear and the other categories were viewed without a visible indication of FNE.

After the instrument was developed, it was tested using textbooks to verify their suitability. It was adjusted, and later it was used by two researchers, individually, in order to analyze the textbooks under discussion. The pages that showed conflict between the two evaluations were reviewed.

The results of this analysis are presented according to the school discipline, school grade, categories, and type of activity present in the books.

## RESULTS

Seventy textbooks were analyzed. It was found that some of the participating schools did not have all the books they were supposed to have, and therefore, it was not possible to collect the same number of books per discipline and grade. Fifth grade had the smallest number of books available.

A total of 2.918 pages were analyzed, and of these, 230 (8.2%) had texts, illustrations, or activities that evidently addressed FNE in a pedagogical manner. Science books had the highest proportion of these activities, followed by portuguese, history, geography, and mathematics (Table 1).

About the categorization of FNE information, number 8 was the most prevalent category (41.3%), followed by 9 (21.3%), 7 (20.9%), and 4 (20.4%).

It is worth mentioning that although the intent to address FNE was identified in 230 pages, sometimes more than one category was identified in the same page. Thus, the number of categories (274) was higher than the number of pages. The same happened to the type of activity. Therefore, 7 categories (2, 3, 4, 7, 8, 9, and 10) were identified in 327 activities in the 230 pages evaluated (Table 1).

**Table 1.** Percentage of pages with information or activities that evidently intended to address FNE according to school grade, categories, and types of activity. Diamantina, MG, 2016

		Disciplines					
		Portuguese	Mathematics	Geography	History	Science	
Percentage of pages that evidently intended to address FNE according to grades, categories and types of activity by disciplines	Grades*	1 <sup>st</sup> grade	2.6 (8/303)	0.0	0.0	-	12.5 (16/128)
		2 <sup>st</sup> grade	3.3 (6/184)	4.5 (9/200)	1.6 (1/61)	7.2 (5/69)	10.6 (20/189)
		3 <sup>st</sup> grade	3.7 (9/242)	2.1 (3/145)	9.1 (11/121)	15.5 (13/84)	17.5 (22/126)
		4 <sup>st</sup> grade	15.6 (20/128)	3.2 (5/158)	7.3 (10/137)	19.4 (7/36)	26.3 (42/160)
		5 <sup>st</sup> grade	2.6 (3/115)	0.0	5.4 (2/37)	-	28.1 (18/64)
		Total number of pages that evidently addressed FNE	4.7 (46/972)	2.3 (17/734)	6.7 (24/356)	13.2 (25/189)	17.7 (218/667)
	Categories**	2	4.3 (200/46)	0.0	12.5 (300/24)	4.0 (100/25)	3.4 (400/118)
		3	0.0	0.0	0.0	36.0 (900/25)	1.7 (200/118)
		4	23.9 (1100/46)	11.8 (200/17)	66.7(1600/24)	36.0 (900/25)	7.6 (900/118)
		7	37.0 (1700/46)	23.5 (400/17)	0.0	12.0 (300/25)	20.3 (2400/118)
		8	26.1 (1200/46)	52.9 (900/17)	0.0	0.0	62.7 (7400/118)
		9	23.9 (1100/46)	17.6 (300/17)	29.2(700/24)	12.0 (300/25)	21.2 (2500/118)
		10	2.2 (100/46)	29.4 (500/17)	0.0	0.0	6.8 (800/118)
	Types of activity*	Theoretical	28.8 (15/52)	18.2 (4/22)	64.5 (20/31)	46.1 (12/26)	50.0 (98/196)
		Objective exercises	59.6 (31/52)	72.7 (16/22)	25.8 (8/31)	53.8 (14/26)	31.6 (62/196)
		Research	9.6 (5/52)	0	3.2 (1/31)	0	6.6 (13/196)
		Themes for reflection	0	9.1 (2/22)	3.2 (1/31)	0	9.2 (18/196)
		Practical activities	1.9 (1/52)	0	3.2 (1/31)	0	2.5 (5/196)

Of 230 pages, categories 2, 3, 4, 7, 8, 9 and 10 were identified, respectively, in 4.3%), 4.8%, 20.4%, 20.9%, 41.3%, 21.3 and 6.1%.

Regarding the total of 327 activities, 45.6% were theoretical, 40.1% objective activities, 6.4% reflective exercises, 2.1% practical activities and 5.8% research topics.

According to disciplines, it was found that geography and science textbooks had the highest number of theoretical activities, whereas portuguese, mathematics, and history books had the highest number of objective activities.

## DISCUSSION

The results obtained showed that FNE was hardly addressed in the textbooks, and it was more frequently identified in science books. It is known that the FNE can be included in cross-cutting themes in the elementary school level, such as: "environment", "cultural pluralism", and "health". Resolution No. 23, 2013, passed by NSFP<sup>16</sup> determined that schools are responsible for innovating the curriculum considering Food and Nutrition as the thematic axis. However, the present study revealed that FNE has not yet been comprehensively included as a cross-cutting theme in elementary schools.

Making a comparison between the results of this research and those published on this topic becomes a challenging task because the studies have specifically analyzed science books and rarely addressed FNE activities<sup>5,20-24</sup>.

As in the present study, some researchers also observed that the science book is the one that most addresses the theme of food and nutrition<sup>24</sup>. Piccole et al.<sup>25</sup> found that books of the third and fourth year had the highest proportion of activities about food and nutrition.

This results show a higher prevalence of FNE categories that refer to the biological/nutritional dimension of feeding. Rebouças<sup>24</sup> when evaluating textbooks used in elementary education in Brasília/DF also pointed to a more significant approach of the biological aspects of FNE. This result has been found by Furh<sup>23</sup>.

According to Greenwood and Fonseca<sup>5</sup>, five an educational approach restricted to the biological dimension is not capable of achieving the objectives of FNE actions, which must encompass the multiplicity of factors involved in the feeding. It should also be noted that reflections on the multidimensional nature of the FNE concept have deepened in recent times, culminating in the publication in 2012 of the aforementioned FNE Reference Framework<sup>15</sup>, as well as with the launch in 2014 of the Food Guide for the Brazilian Population<sup>26</sup>, this gives visibility to the socio-cultural perspective of food, bringing in its bulge a broader view of food, that is, food as a multi-determined practice.

Although the publications on analysis of the science books cited above mention that this theme is present in the books more in their biological dimension, they also suggest that the activities on food and nutrition do not give subsidies for students to understand food labels or to position themselves critically read or watch advertisements related to food<sup>21</sup>. And that there are different degrees of distance from the reference knowledge, that is, it approaches the subject superficially and with erroneous concepts<sup>20</sup>.

Others also mention that more current issues such as nutritional transition<sup>23</sup>, obesity<sup>5,22,23</sup>, advertising, regional foods, pesticides, food guides among others should be present in the books<sup>23</sup>.

It should be shown out that, of the analyzed books, only 4.3% of them had a publication year higher than 2013 and, as mentioned previously, the discussions and expansion of the concept of FNE<sup>15</sup> and the new classification of foods<sup>1</sup> are recent. And these facts can justify why the subjects related to food and nutrition were exhibited, in textbooks, away from the intended multidimensionality of food.

About the types of activities in which FNE was worked on the books, a more considerable proportion was perceived in theoretical activities and objective exercises. This type of

analysis was conducted by Rebouças<sup>24</sup>, and in it the collection instrument evaluated only three options: objective exercises, research, and themes for reflection. In the study by Rebouças<sup>24</sup> the subject of food and nutrition was more approached in objective exercises.

It is desirable that textbooks in bringing FNE activities use less technical approaches, and that they promote students' self-care and autonomy concerning food and health, and, also, encourage content to be more correlated with the daily life of the students. Thus, we believe that theoretical activity or objective exercises do little to contribute to this type of approach.

It is believed, however, that both the food and nutrition theme focusing on FNE and the food guide as an educational resource may occur in the school environment if there is a broad interaction between government, nutritionists, elementary school teachers, authors and publishers of textbooks. And in this interaction, these actors should discuss how this topic should be introduced in the textbook (LD), and the role of each one in this process. Besides, the federal government needs to make its programs that have the FNE among its objectives, namely National School Feeding Program (NSFP) and Health in the School Program (HSP), talk to each other and use the LD to do so. School feeding, like the LD, is made available by the federal government to all public school students. Moreover, considering that FNE is among the objectives of the NSFP and the HSP, it is necessary for the government to integrate these programs with the of LD in the school environment.

However, according to Greenwood and Fonseca<sup>5</sup> for this to occur, it is necessary to involve the editorial field so that the author of the textbook chooses to offer a connection with these programs.

However, these authors<sup>5</sup> even mention that ensuring the presence of FNE in LD, addressed in a problematic way and connected with reality, is not enough. It is also necessary that the teacher feel encouraged and able to develop these activities. In addition, for this, it is essential that teachers are submitted to permanent education both by the local government institutions that work in the area of food and nutrition and in this educational process, the FNE Framework and food guide should be contemplated.

## CONCLUSIONS AND IMPLICATIONS

Based on the MRFNE<sup>15</sup> and food guide for the Brazilian population<sup>25</sup>, this research concluded the elementary school textbooks evaluated proved not very effective to working the theme FNE in a way to interact with the student, arouse his

curiosity on the theme and understand it in its multiple dimensions, i.e. in addition to the biological aspects of feed.

It is necessary to review the organizational structure of schools to provide the teachers, the pedagogical team, and the school staff with conditions that will motivate them and give them more time for research, reflection, and learning about FNE.

It is also expected that textbooks would not only have a larger amount of feeding content, but FNE would also be included in all disciplines in a cross-cutting manner. We hope that this requirement is carefully considered when choosing the textbooks to be adopted in the school. Furthermore, it is necessary that all sectors directly involved in teaching (Ministry of Education) and Municipal Departments of Education and the provision of meals to elementary school students (NFSP) can provide better conditions for teachers, nutritionists, and the school community to appropriately address this theme.

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Frame 1: Instrument for text book analysis, Diamantina, MG, 2016.

## INSTRUMENT FOR TEXT BOOK ANALYSIS

### FIRST SECTION: Textbook evaluation sheet review

Detailing of the textbook:

Book title:	
Discipline:	
Authors' name:	
Grade:	
Edition/Year of publication:	
Publisher name:	
Total number of pages:	

### SECOND SECTION: Textbook analysis

**PART 1– Nutrition, Dietary habits, Food, and Nutrients and FNE: pictures, concepts, contextualization and approach to provide information transmission approach**

Textbook	Grade	Page number	Are there PICTURES/ FIGURES related to Nutrition, Dietary habits, Food, Nutrients and FNE?	Is there INFORMATION without words related to Nutrition, Dietary habits, Food and Nutrients and FNE?	Presence of information/words related to Nutrition, Dietary habits, Food and Nutrients and FNE						The pictures or Nutrition, Dietary habits, Food and Nutrients and FNE are present in what type of activities?								
					Are they adequate?			Are there examples?											
					Y	N	NA	Y	N	NA	Theory	objectives exercises	Research projects*	Reflective exercises	Practical activities**				

\* Research projects refer to activities/homework assigned to the students instructing them to talk/interview adults and conduct research on the Internet, among others.

\*\* Practical activities refer to activities in which the teacher instructs the students to carry out a practical activity and/or conduct experiments.

Y-Yes; N-No. NA- not applicable

**PART 2 – Information related to Nutrition, Dietary habits, Food, Nutrients and FNE: contextualization and approach to provide information.**

Textbook	Grade	Page number	Is the information related to Nutrition, Dietary habits, Food and Nutrients and FNE present in a specific unity or is it related to another content?		Is the information related to Nutrition, Dietary habits, Food and Nutrients and is it presented in a context in which its relationship with FNE is EVIDENT*?	When INFORMATION related to Nutrition, Dietary habits, Food, and Nutrients and FNE presented in an FNE context														
						Information contextualization					Examples of information									
			Is it present?		Is it adequate?			Are they present?		Are they present?										
			Related to another content	Specific unity	Y	N	Y	N	NA	Y	N	Y	N	Y	N	NA				

\*Information with the clear intention of FNE means that the activity contemplates the expanded concept of FNE published in the FNE Framework<sup>14</sup> and has intentionality of education

**PART 3 – Nutrition, Dietary habits, Food and Nutrients and FNE: information and description of what was found**

Textbook	Grade	Page number	category number	Textual description of what was found	Comments

**PART 4 - Categories for textbooks analysis**

Category	Description
01	There are pictures of foods, information, or activities related to eating habits, but they are <b>out of the context</b> according to the theoretical definition of Nutrition, Dietary habits, Food and Nutrients and FNE
02	There are pictures of foods, information, or activities related to <b>dietary patterns and nutritional status of the Brazilian population and around the world.</b>
03	There are pictures of foods, information, or activities related to dietary habits addressing <b>the history of Brazilian's eating habits and around the world.</b>
04	There are pictures of foods, information, or activities related to dietary habits based on <b>food production/growing or environmental sustainability.</b>
05	There are pictures of foods, information, or activities <b>THAT DO NOT CLEARLY ADDRESS</b> dietary habits, but refer to foods, diet, dietary habits, or suitable eating places or time.
06	There are pictures of foods, information, or activities related to dietary habits addressing <b>eating practices in general, and eating habits and behaviors</b> (refer to eating practices or food preparation, recipes, tastes, flavors, and food preferences, without <b>clearly addressing</b> the idea of healthy habits).
07	There are pictures of foods, information, or activities aimed at <b>stimulating healthy eating practices</b> (clearly address aspects related to the food pyramid and diet and nutrition throughout the life course).
08	There are pictures of foods, information, or activities that refer to <b>dietary habits as a health risk or protective factor</b> (foods or nutrients related to health or diseases).
09	There are pictures of foods, information, or activities that refer to dietary habits addressing <b>food hygiene and conservation.</b>
10	There are pictures of foods, information, or activities that refer to <b>nutritional composition of foods</b> , i.e., they include the following nutrients: carbohydrates, proteins, lipids, vitamins, minerals, water, and fibers, which are presented as components that are essential for health maintenance.
11	There are pictures of foods, information, or activities that refer to <b>nutritional composition of foods</b> , i.e., they include the following nutrients: carbohydrates, proteins, lipids, vitamins, minerals, water, and fibers, which are <b>ONLY</b> mentioned and are not related to health maintenance or risks.