



## Social representations linked to school feeding: the case of public schools in Mexico City

Representaciones sociales relacionadas con la alimentación escolar: el caso de las escuelas públicas de la Ciudad de México

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**ABSTRACT** Mexico is facing an unprecedented epidemic of obesity and overweight, especially among children. This paper seeks to identify the main social representations related to school meals present in the discourse of different actors within the schools. Twenty interviews with school staff and ten discussion groups with boys and girls from 12 schools were conducted. Three main conceptions were identified in relation to school meals: 1) junk food vs. homemade food; 2) different perspectives on the importance of eating fruit; and 3) the enjoyment experienced while eating at school. The contribution of this information towards a better understanding of the mealtime supply of the schools and the demand of the students is discussed. This study also permits the identification of certain elements which profoundly structure the relationships of different school actors to school feeding, which are based on: 1) Ideas about nutrition generated by different and sometimes contradictory fields of knowledge, demonstrating the dynamicity and complexity of the practice of eating; 2) children's understandings about how to classify and prioritize foods; and 3) the connections between food and cultural identity.

**KEY WORDS** Overweight; Obesity; School Feeding; Mexico.

**RESUMEN** México está confrontando una epidemia de sobrepeso/obesidad sin precedentes, en particular entre los niños. El objetivo de este trabajo fue identificar las principales representaciones sociales relacionadas con la alimentación en la escuela, presentes en los discursos de los diferentes actores escolares. Se realizaron 20 entrevistas con actores escolares y 10 grupos de discusión con niños y niñas de 12 escuelas. Se identificaron tres principales concepciones, representaciones en las que estructuran su relación con la alimentación en la escuela: 1) comida "chatarra" versus comida casera; 2) valoración de la fruta desde diferentes perspectivas; 3) función placentera de la comida escolar. Se argumentará la contribución de esta información para entender mejor la oferta y el consumo de los escolares. El estudio permitió identificar algunos elementos que estructuran profundamente la relación de los diferentes actores escolares con la alimentación escolar y que se relacionan con: 1) presencia en los discursos de ideas y conocimientos sobre la alimentación, a veces opuestos y generados por diferentes campos de saberes, que muestran el carácter dinámico y complejo del hecho alimentario; 2) interiorización por parte de los niños de un sistema de jerarquización de los alimentos; 3) carácter identitario de la alimentación.

**PALABRAS CLAVE** Sobrepeso; Obesidad; Alimentación Escolar; México.

## INTRODUCTION

The 2006 National Survey of Health and Nutrition (ENSANUT, from the Spanish *Encuesta Nacional de Salud y Nutrición*) revealed that, in Mexico, the prevalence of overweight and obesity according to body mass index has doubled, with the prevalence of obesity tripling in the last two decades in all population groups (1). Children are no exception; on the contrary, the most worrying increase in the last seven years was reported in school children (5-11 years), with a 33% increase of in the prevalence of overweight/obesity (OW/O), from 20.2 to 26.8% (2). It is worth remembering that this relatively new phenomenon is in addition to the historically documented problem of malnutrition – now in decline (3) – on the basis of which public programs were designed to guarantee populations identified as vulnerable access to certain foods considered staples (4).

The national and international literature documents a great variety of factors related to OW/O, which include those of a biogenetic (5), economic (6) and environmental (7-9) nature. In the particular case of schools, studies carried out in Chile (10), England (11) and the United States (12), focused their analyses on environmental factors, putting into evidence an *in-school* supply of food and drinks rich in fat and sugar combined with a marked sedentarism in children. Nevertheless, to understand human eating habits, it is not enough to focus only on food's biological and nutritional functions; it is also relevant to contemplate sociocultural factors (13-14), as they reveal such meanings and functions as belonging a particular group or social status or expressing love and affection, among others. To comprehend current and past eating practices, it is necessary to approach their symbolic dimension, recognizing foods as *bearers of meaning* (15). If we acknowledge that what we eat is greatly conditioned by these socially constructed meanings, comprehending school feeding implies analyzing in what way it is conditioned by social and cultural processes.

Through a study carried out in public schools of Mexico City, the role of those socially constructed meanings of food and body were

analyzed using the concept of *social representation* (SR), and their relation with the *obesogenic* school environment was explored. In other words, do these SRs explain *in-school* availability and consumption and/or vice versa? Were they developed by school actors in accordance with the supply and consumption of these energy-dense foods, rich in sugar, flour and fat and low in fibers? This qualitative study was conducted, along with three other studies (a), during the formative research phase (b) (16) of the overarching project "Promotion of adequate physical activity and healthy eating in the Mexican education system for the prevention of childhood obesity" (*Promoción de actividad física adecuada y alimentación saludable en el sistema educativo mexicano para la prevención de obesidad infantil*), which was carried out during the 2005-2008 school years with the objective of designing and assessing an intervention for the promotion of healthy lifestyles in 4th and 5th grade students (between the age of 8 and 11) in public primary schools in the south of Mexico City. In order to contextualize the discourses and social representations related to feeding within the school environment, we will touch briefly upon the results obtained in the previous phase of the general project (17), in which the following was documented:

- 1) A significant prevalence of OW/O among 4th and 5th grade children. In a total population of 1,731 students, 27% presented overweight and 14% obesity;
- 2) Five or more opportunities for food consumption in less than five hours (c);
- 3) Limited availability of vegetables and fruits, in contrast with a large supply of energy-dense foods, rich in sugar, flour and fats and low in fibers;
- 4) Limited options for carrying out physical activities (18).

## THEORETICAL FRAMEWORK

This study uses phenomenology (19), a social theory oriented to the study of

everyday life which emphasizes the constructed nature of social reality through communication and language interaction among individuals. In this sense, we are a product of society because we shape ourselves through our interaction with others. Berger and Luckman also suggest that society even intervenes in the functioning of our body, as happens with sexuality and nutrition. Indeed, the act of eating does not respond exclusively to biological needs through the consumption of calories and nutrients, but rather is structured by society and at the same time structures society. Bourdieu (20) argues that feeding practices and preferences are not personal choices; they are defined and constructed according to our position within the "social space," in such a way that he could, for example, differentiate the foods of the working-class from those of professionals. In other words, according to Fischler (21), we eat according to who we are, but we also are what we eat since eating takes part in the individual and national construction of a people.

With the purpose of obtaining an analytic tool for approaching the symbolic dimension and the collective representation of eating, we utilized the central concept of *social representation*, defined by Moscovici (22) as a knowledge of everyday life developed based in our experiences as well as the information, knowledge, attitudes, icons and images that we receive and transmit through tradition, education and social communication. SRs play a key role in the behaviors to which they refer (23-24), in this case eating habits, which according to Lalhóu (24) constitutes "a manual that a subject carries in his head and can use to procure a framework for action" (24, page 273) [own translation].

In the *stricto sensu* field of public health in Mexico, the SR perspective has been little studied and what has been identified relates mainly to diseases (25-26) and health (27), but not to eating habits. Nevertheless, other disciplines such as anthropology and social medicine, medical anthropology and gender studies, have worked at great length with this concept, generating an important body of knowledge regarding the symbolic dimension of eating and food in Mexico (28-30).

Taking into account this literary review, and using the analytic category of SR, this study is an attempt to identify ideas and views of eating understood in an ample sense. We consider the type of relationship one establishes with food, with one's body, with the other people present at school, which may help to reach a greater comprehension of the factors involved in the construction of eating practices and, in particular, those practices that promote overweight and obesity.

## MATERIAL AND METHODS

Within the formative research, which is the first step in designing an intervention sought to be culturally accepted, we attempted to collect information related to the school environment and its actors, with the purpose of designing an intervention that takes into account ways of life and viewpoints identified in the population. In this article, only the results of the qualitative study that approaches the symbolic dimension of eating will be discussed.

The schools participating in the overarching research project were selected randomly from a group of schools which shared common population and organizational criteria (morning shift, low socioeconomic status according to the Secretary of Public Education data, beneficiary of the Federal School Breakfast Program of Integral Family Development, a population greater than 300 students, and at least two classrooms per grade). This qualitative study was carried out in 10 of the 12 schools participating in the project, with 320 to 726 students enrolled. To guarantee confidentiality, each school was assigned a letter (from School A to School L). These schools are distributed within 4 of the 16 boroughs of Mexico City.

Due to time and resources limitations, information could not be collected in two of the schools (H and K); these schools presented great similarities to other schools in terms of the food supply within the school. Therefore, information was collected in 10 Mexico City schools between February and June, 2006. These schools had between 320 and 726 students.

The previous exploration phase also permitted access to elements and criteria with which to identify and select study participants. In this way, it was observed that unlike other schools, school B did not have as large a supply of foods rich in sugar, flour and fat, and also implemented measures for controlling food sales during the break (d). These considerations led us to think that there might be greater attention to food concerns among principals and perhaps teachers of this school in comparison with the other schools.

In order to approach different possible ways of understanding school feeding, the discourses of school principals (SP), physical education teachers (PET), a teacher per group with responsibilities in the running of the school cooperative (T), mothers (M), suppliers (SUP), and 4th and 5th grade children (CH) were collected. Children and mothers were randomly selected from the schools participating in the study. The other participants (SUP, PET, T) were identified with the help of fieldworkers who in the previous phase of the study had the task of identifying informants with varied experiences and backgrounds.

In Table 1, information regarding the objectives of the information collection in the qualitative study is presented. Four in-depth interviews were conducted for each type of adult school actor (SP, T, PET, SUP, M) as well as ten discussion groups (DG) (31) with girls and boys (five regarding food and five regarding physical activity). Structured guides were implemented for both instruments.

It is worth mentioning that the sampling of participants was theoretical (32), which is why, in this case, what is important is not the number of participants, but rather the potential of each to help us to achieve greater theoretical understanding. Therefore, the cases were selected according to their potential to help us direct and refine our understanding of the SRs of different actors involved in school feeding. This data selection procedure was aimed at choosing, for each type of actor, people with differences in the defined criteria, under the hypothesis that these criteria could influence their idea of school feeding. In the case of school principals and 4th and 5th grade

teachers, sex and professional seniority were considered; physical education teachers were selected according to their sex and whether or not they held at least a bachelor's degree in physical education. Food suppliers were selected according to their sex and whether or not they sold vegetables and fruits (prepared or in stews), such as potatoes sellers. The number of participants for each type of actor was defined *a priori*, taking into account the limitations in economic resources and the necessity of producing data within a limited period of time.

The adult participants gave their consent to take part in the study through an informed consent letter previously approved by the Ethics Committee of the National Public Health Institute. In the case of children, their legal guardians signed the consent letter and the children were asked if they agreed to participate before initiating the discussion group. Two teachers, one of 4th grade and the other of 5th grade, declined the invitation due to an excessive workload and to replace them, the interviews were carried out with colleagues of other grades who had recent experience with children in those grades and with the school cooperative.

The interviews and DGs were audio recorded and subsequently transcribed into Word files in their entirety. With a basis in grounded theory (1), the discourses present in the interviews and DGs were analyzed by applying a continuous *analytic procedure of comparison* among the discourses according to the type of school actor and the school. Similarly, the theory of social representations (33) allowed us to observe the totality of the proposals, reactions and opinions expressed regarding school feeding, as well as to pay attention to how they were developed according to two essential processes: objectification and anchoring (34). The program NVivo (NUD\*IST) was used to organize the information according to thematic categories identified *a priori*. At every moment, the project researchers maintained the anonymity of informants and the confidentiality of their information.

Table 1. Primary objectives of data collection and instrument applied, according to the type of school actor. Mexico City, 2006.

School Actor	Objectives	Type of instrument applied
School Principal (SP)	<ul style="list-style-type: none"> <li>▪ To collect information related to the functioning of the school cooperative and the everyday eating practices of students within the school.</li> <li>▪ To collect information about the everyday eating practices of the children within the school.</li> <li>▪ To study social representations related to eating in general and school feeding in particular (opinions about the foods available within the school and the representation of "good" nutrition for children).</li> <li>▪ To explore their potential role as promoters of eating behaviors.</li> </ul>	In-depth interview
Teachers (T) with responsibilities in the school cooperative	<ul style="list-style-type: none"> <li>▪ To collect information related to the functioning of the school cooperative and the everyday eating practices of students within the school.</li> <li>▪ To collect information about the everyday eating practices of the children within the school.</li> <li>▪ To study social representations related to eating in general and school feeding in particular (opinions about the foods available within the school and the representation of "good" nutrition for children).</li> <li>▪ To explore their potential role as promoters of eating behaviors.</li> </ul>	In-depth interview
Physical education teachers (PET)	<ul style="list-style-type: none"> <li>▪ To explore the initiatives developed by physical education teachers in relation to the promotion of certain foods.</li> <li>▪ To collect information about the everyday eating practices of the children within the school.</li> <li>▪ To study social representations related to eating in general and school feeding in particular (opinions about the foods available within the school and the representation of "good" nutrition for children).</li> </ul>	In-depth interview
Food suppliers (SUP)	<ul style="list-style-type: none"> <li>▪ To document their history in the school as vendors.</li> <li>▪ To identify the elements they take into account when choosing products to sell and methods of preparation.</li> <li>▪ To study social representations related to eating in general and school feeding in particular (opinions about the foods available within the school and the representation of "good" nutrition for children).</li> <li>▪ To explore their potential role as promoters of eating behaviors.</li> </ul>	In-depth interview
Mothers (M)	<ul style="list-style-type: none"> <li>▪ To explore eating practices in the home, in general, and of the children in particular, with emphasis in the consumption of plain water, sodas, vegetables and fruits.</li> <li>▪ To inquire about lunch and the money given to children to buy food during the school day.</li> <li>▪ To study social representations related to eating in general and school feeding in particular (opinions about the foods available within the school and the representation of "good" nutrition for children).</li> <li>▪ To explore their potential role as promoters of eating behaviors.</li> </ul>	In-depth interview
Children (two groups of girls and three groups of boys)	<ul style="list-style-type: none"> <li>▪ To inquire into children's food preferences and eating practices within the school.</li> <li>▪ To study the social representations related to eating in general and within the school in particular, and the representation of "good" nutrition.</li> </ul>	Discussion groups (topic: food)
Children (three groups of girls and two groups of boys)	<ul style="list-style-type: none"> <li>▪ To inquire into the physical appearance they consider ideal and see how they do or do not relate this ideal with physical activity and/or eating habits.</li> </ul>	Discussion groups (topic: physical activity)

Source: Own elaboration.

## RESULTS

Of the different SRs identified in the testimonies of school actors, three SRs closely related to feeding and found in the discourse of all the actors are presented in this article. It is important to mention that the PET group is distinct from other groups of actors since, generally, their representations regarding feeding are closer to the hegemonic nutritionist discourse than is that of the other school actors. However, this does not mean that – even in the PETs' discourses – representations belonging to other environments cannot be identified, for example representations stemming from food industry marketing.

### Junk food versus homemade food

The first SR identified and present in all school actors refers to the opposition established between “junk” and “homemade” food (e):

**FAC:** *What is “junk” food?*

**CH:** *...pork rinds, fried foods, sweets, sodas.* (Discussion group, 5th grade girls, School G)

According to the different interviewees, this “junk” food is characterized by being rich in flour, fat, sugar and/or chemicals, among other things:

**PET:** *...They have a lot of flour and I think children shouldn't eat that, because of what it is, for example refined foods, right?, sugar, flour, all of that stuff that doesn't really provide us with nutrition and for that reason is so attractive to children, like pork rinds and crunchy foods.* (Interview with a Physical Education Teacher, School J)

**T:** *...Now there are so many chemicals and things like that, for example these soups.* (Interview with a Teacher, School G)

The different actors discredit “junk” food which they consider “unhealthy,” arguing that it is “not nutritious” and that it is “fattening,”

causing “overweight and obesity.” They also relate the consumption of junk food to diseases such as diabetes and cholesterol, as illustrated by the following:

**FAC:** *What diseases are caused by “junk” food?*

**CH:** *Cholesterol in the blood. My grandma, my aunt ate a lot and their veins got clogged, they had to get the fat taken out of their veins.*

(...)

**FAC:** *What problems does that cause?*

**CH:** *It can damage your heart. My mom ate so much when she was young... now for every shrimp that she eats, she makes her cholesterol worse, so she can't eat a lot of shrimp.*

**FAC:** *Ok, does anybody else want to say something?*

**CG:** *Also you can get diabetes from eating a lot of sweet things, that's what makes you... it makes the sugar build up inside you.* (Discussion Group, 5th grade girls, School G)

On the other hand, adult school actors attribute “nutritional” properties to “homemade” food, that is, those foods typical in Mexico made with a corn base and prepared at home, such as quesadillas, tacos, tostadas, sopes or sandwiches (f). According to children, foods that are nutritional offer “energy” and “health” and facilitate “learning.”

**FAC:** [Returning to the concept of “nutritious” mentioned by a CH] *What is nutritious? Is that good or bad?*

**CH1:** *Good.* [Answer of several children]

**CH3:** *You have more energy, and it is good for your health.* [Talking at the same time]

**CH4:** *It gives you proteins and helps you wake up to come to school.* (Discussion Group, 5th grade boys, School B)

Through the testimonies of different types of actors, a strong presence of concepts such as “healthy” and “nutritious” used as synonyms is observed. These concepts belong to the medical field and are used by school principals, teachers and suppliers to justify the types of food available at school.

This positive appraisal of the “nutritional” quality of homemade food does not consider its

preparation method (fried, grilled, steamed) and/or the ingredients used (cream, oil, etc.):

**INT:** *What is your opinion of the food currently sold by the cooperative?*

**SP:** *Well, I think it's fine that tacos are sold... because they are prepared with rice...with meat... with a variety of ingredients, like what one eats at home...even we teachers eat what is sold here... (Interview with a School Principal, School C)*

It is important to clarify that the inventories of the food sold during the break in the schools participating in this study show large quantities of "homemade" food with a great deal of fat, salt, and flour, thus sharing nutritional properties with "junk" food. Nevertheless, school actors conceptualize these two types of food differently. With this binary representation of "junk" and "homemade" food and with the purpose, as mentioned by several school principals, of improving eating habits from a nutrition and health perspective, measures based exclusively upon the strategy of limiting or eliminating "junk" food were adopted.

Regarding sandwiches and tacos, both constitute a staple food filled with ingredients such as vegetables, meat, or beans, and are valued positively. This leads us to the question: why are these foods valued? Is it because they are made of corn or wheat, or because they are prepared with vegetables, meat or beans?

### Assessment of vegetables and fruits from different perspectives

There is consensus among all the actors regarding the perception of vegetables and fruits as "nutritious" and "good for your health." At the beginning of the DGs, children upheld normative views which did not match their practices, but rather responded to what they thought was expected from them. In that sense, rhetorically, they expressed their liking for vegetables and fruits and emphasized the health benefits of their consumption:

**FAC:** *Which type of foods do boys and girls like to eat?*

**CH1:** *Fruits.*

**CH6:** *Vegetables.*

**FAC:** *Let's see, what did you say Fernanda? (...)*

**FAC:** *Let's see, Viviana, why do you think children like fruits?*

**CH1:** *Because they help them to...um... fruits help your body and your health a lot.*

**FAC:** *How does fruit help your body? Let's see, who'd like to answer? How does fruit help your body?*

[Silence and then murmurs]

**CH6:** *With the vitamins they have.*

**FAC:** *With the vitamins they have, for example, which ones?*

**CH6:** *Some of them have vitamin C, others have vitamin B and iron.*

**FAC:** *But, how does fruit help your body?*

**CH4:** *It helps our bodies work well.*

(...)

**CH6:** *It helps us have good digestion. (Food Discussion Group, girls, School G)*

In these exchanges, we could find a certain analogy with the information/message generated by the health sector and present in biology textbooks, or in the different campaigns for the promotion of vegetables and fruit consumption, which participate in constructing, circulating and making familiar the social representation related to the concepts of health and good nutrition.

Although the consumption of vegetables and fruits is idealized by the different actors interviewed (including the children themselves, as can be appreciated in the above DG fragments), such consumption is limited within the school, partly because of preferences for other types of food. Once trust with the facilitator (FAC) was established in the DG, children began to express their preference for consuming so-called "junk" food because it "tastes better":

**FAC:** *And fruits, what about fruits and vegetables? Do children like fruits?*

**CH1:** *Not much. They sell fruit here, but kids prefer to buy pizza, popsicles, the lady always has a lot of fruit left over, and that's bad because we should eat fruits and vegetables because our*

bodies need them. (Feeding Discussion Group, boys, School G)

**FAC:** *And what about drinks? What drinks, water, liquids do children like?*

**CH** (All): *Soda.*

**FAC:** *Soda?*

**CH** (All): *Yes.*

**FAC:** *Why do you like sodas, do you think?*

**CH6:** *Because they are sweeter [than plain water].*

**CH1:** *Because they taste better.*

**CH:** *They have more flavor [than plain water].* (Food Discussion Group, girls, School A)

It is interesting to note that the sweetened industrial beverages sold in schools, prepared with minimum quantities of fruit (around 5%), are considered “healthy” simply because they contain fruit, as can be observed in the following:

**T:** *...that is to say, with the idea that children receive the healthiest and freshest food, the popsicles are made of fruit...as is XX [sweetened beverage with fruit pulp], that is to say, XX is sold because it contains fruit and all that... (Interview with a Teacher, School E)*

**SP:** *...They tell us [the Secretary of Public Education] that the products sold by the cooperative must be quality products and cheaper than those sold in the street, and we respect those requirements. [...] XX [sweetened beverage with fruit pulp] is the one of the juices that has more fruit... and well, it is also what we sell them. (Interview with a School Principal, School C)*

It is as if the quantity of fruit used in preparing a beverage (or vegetables in the case of food) were irrelevant; the mere fact that the product contains fruits or vegetables makes it “healthy.” Therefore, notwithstanding the quality of tortilla and the sandwich bread acknowledged by school actors, it is possible that by adding vegetables, for example, the perception that school actors have of these foods as “healthy” is strengthened. It is important to highlight that this way of defining what is healthy allows school

actors to expand the variety of food and beverages classified as “healthy” because they contain small quantities of vegetables and fruits. With this idea, school staff and mothers believe that by facilitating access to sweetened beverages with fruit pulp or sandwiches with vegetables, they are offering children healthy and nutritious food and, as a consequence, contributing to their good health:

**SP:** *...also XX [brand of sweetened beverage sold in the schools of Mexico City] is one of the juices that has more fruit according to... according to what they say, right? And well, it also what we sell them. (Interview with a School Principal, School C)*

Nevertheless, apart from being prepared with vegetables or fruits, other elements may intervene in generating a positive assessment of foods and beverages. We cannot ignore, for example, the motives and the reinforcement of cultural identity that underlie the selection of this beverage, since it is elaborated by a Mexican workers’ cooperative:

**SP:** *Well, yes...What the children drink from what the cooperative sells, is mainly and almost exclusively XX [brand of a sweetened beverage with fruit pulp] since XX, well because XX, to begin with it is a Mexican product. We are nationalists... (Interview with a School Principal, School D)*

It is possible to extrapolate this same reasoning to ancestral corn-based foods such as tacos, tortillas or quesadillas, when reading the following interview fragment:

**T:** *...for me tacos and tortillas are Mexican staples, the essential foods of Mexicans. I think tortillas are good, and tacos, with variations. (Interview with a Teacher, School G)*

In summary, around the image of vegetables and fruits, different types of registers are referenced (health, cultural identity) according to the different discourses constructed. It was also highlighted that, although the health benefits related to vegetables and fruits are

repeatedly mentioned, this does not translate directly into children's consumption of these foods.

### Enjoyment experienced while eating at school

In order to consume the foods and beverages sold at school, children need money. It is striking that parents give their children considerable amounts of money daily for them to buy lunch at school. In the previous phase of formative research, it was documented that children received daily between 2 and 20 Mexican pesos (between 0.17 and 1.72 dollars), a considerable expenditure for low-income families taking into account that the daily minimum wage in 2006 was less than 50 Mexican pesos (4.30 dollars).

At some level it is as if eating at school had the function of satisfying children's cravings:

**M:** *...During the break they eat what they want since you give them money to buy, I don't know, a taco, fruit, gelatin, and maybe they go and buy pork rinds.* (Interview with a Mother, School C)

Although school actors consider that some foods qualified as "junk" foods, like pizzas, are sold within the school, they justify in some way the sale of these foods referring to the tastes of the children:

**T:** *The XX [industrialized] soups, pizzas are also sold [in the cooperative], they aren't very nutritious, but it is a food that's become popular and children like it [...] The truth is that we are original, right? We want to feel... well, I don't know... foreigners.* (Interview with a Teacher, School G)

This concept of school feeding supports another larger concept related to the discussion between the school and the family regarding who is responsible for feeding children. The teachers, principals and suppliers remark that mothers are responsible for the proper feeding of their children:

**INT:** *Do you think there is any relation between the food sold here at school and children's health?*

**T:** [Silence] *Well no, because I consider that the most important and central meals they receive at home, right? Here, they buy food mainly to satisfy their hunger... but, I don't think it's the most essential food and it doesn't interfere with their education... No, no.* (Interview with a Teacher, School C)

Therefore, school is a place that allows children in some way to satisfy their cravings and their hunger. Consequently, a differentiation is observed according to the place (school versus home) and the respective role in providing food for children (satisfying cravings and hunger versus feeding).

### DISCUSSION

Although a detailed description of the supply of foods available within schools is important and constitutes the first step to understanding the relationship of schools to the OW/O epidemic, it is also crucial to comprehend the meaning that the different actors give to school feeding.

With the analysis of SRs we attempted to approach the conceptualizations of school actors regarding school feeding in order to understand the way in which the SRs of food and the school food supply interact with one other. Although in the presentation of the results, in reference to the sweetened beverage with fruit pulp and tacos, several situations appear in which the role that these SRs play in selecting certain foods for the cooperative is understood, it is also necessary to consider the role of the supply itself in the construction of SRs. This question is possibly even more relevant when posed in an educational context and with children in a phase of learning tied not only academic subjects, but also values and lifestyles related, for example, to food. Unfortunately, due to the general objectives of this research phase and time and resource limitations, this type of information could not be collected.

As a result of this project, three major SRs were identified among the school actors in connection with food. The first reflects “naturalization” (33) understood as a process by which categories and concepts become obvious or unquestionable truths, as is the case of the concepts of “nutritious” and “healthy” used to differentiate “junk” from “homemade” food. Another SR reveals a positive appraisal of vegetable and fruit consumption based on a number of considerations. The last SR shows the link between eating at school and taste and enjoyment.

The presence of discourses, ideas and knowledge about food, sometimes contradictory and generated within different fields of knowledge, shows the dynamic and complex nature of eating practices. The strong presence of the hegemonic discourse (35) produced by the health field, characterizes the objectification process (19,22) of the SR of eating. Therefore, concepts such as “healthy” and/or “nutritious,” constructed within the hegemonic health field, structure the actors’ experiences related to school feeding in such a way that they end up becoming the *reality* itself.

This study enabled us to identify certain elements which deeply structure the relationship between the different school actors and school feeding. Those elements are related to:

- 1) The presence within the discourses of ideas and messages about eating, sometimes contradictory and generated within different fields of knowledge, which shows the dynamic and complex nature of eating practices, and the strong presence of the discourse produced by the health field.
- 2) Children's understandings about how to classify and prioritize foods.
- 3) The way certain beverages and foods present in schools reinforce cultural identity.

### **The discourse regarding feeding: the intersection of several conceptualizations**

An important penetration of the health/nutrition register within the discourses of the different school actors, which coexists with ideas of

other registers, can be observed. Regarding vegetables and fruits, the discourses are impregnated with this discursive construction of “scientific healthy eating” (36) produced by the health sector. With this background in the discourses of school actors, arguments were identified that utilize the justifications generated by the health field and constructed around the notions of benefits and risks in health and nutrition. The widespread use among all the actors of terms such as “nutrients,” “nutritious,” “vitamins,” etc., was also noted. Although this scientific discourse is mentioned by the school staff and students, some adaptations should be highlighted, as was analyzed, for example, in reference to the benefits of fruits and vegetables even in minimum quantities. Such adaptations are “anchoring” precisely because they allow the strange, in this case “scientific healthy eating,” to become familiar. At the same time, the use of concepts and ideas that belong to other semantic registers, for example, related to enjoyment or the cultural identity underlying references to beverages with fruit pulp or tacos. These different fields generate ideas about feeding which are not always compatible with one other. Therefore, the point is to comprehend how actors create “collages” to reconcile and connect contradictory ideas and views that belong to different registers, as could be observed with beverages containing fruit pulp. In this case, the SR based on an understanding of fruit, allowed for the combination of two opposite orientations: satisfying children’s cravings and, at the same time, covering the imperious necessity marked by modern nutrition to consume vegetables and fruits because of their fiber and vitamins.

### **Children’s understandings about how to classify and prioritize foods**

Based on our difficulty collecting testimonies of children’s experiences and preferences, we infer the presence of a system for classifying foods in which some foods have a high symbolic value (such as vegetables, fruits and tacos) while others (like “junk” food) have a low symbolic value. It is therefore understood how this classification system can produce an important discontinuity between the discourses

and the practices regarding food consumption, and even more, the food preferences of school actors (in this case children). In addition, within this classification system, it is as if among all the foods identified as “good to eat” (37), some types of food were better than others. Although the “scientific healthy eating” viewpoint generated by the health sector is quite present in the construction of this classification system, cultural identity considerations also participate in the classification and prioritization of foods.

### Connections between food and cultural identity

This point is particularly perceptible in the discourses related to the sweetened beverage with fruit pulp omnipresent in all schools. The existing literature (38,39) tends to reaffirm the importance of tacos, tortillas, tamales and even sandwiches, foods deeply seated in the Mexican culture. Indeed, we hypothesize that these foods are viewed positively because of their relationship with the Mexican cultural identity. Similarly, we hypothesize that this classification system based upon an antagonism between “junk” food, unhealthy and foreign, versus “homemade” food, healthy and Mexican, may be understood as a reaction on the part of the adults to a massive introduction of foreign industrialized foods of poor quality which also threatens Mexican food integrity (39). Nevertheless, this dualism is not translated into the prohibition of these foods (hot dogs, pizza, etc.) within the schools by school actors, but rather into the coexistence of both types of food of national or foreign origin. In fact, in the 2008 National Survey of Health in Schoolchildren (ENSE, from the Spanish Encuesta Nacional de Salud en Escolares), it was documented that corn tortillas and soft drinks were the foods most consumed by primary school students (40).

### CONCLUSION

Apart from the particular nature of the results confined to the context of Mexico City,

several lessons are useful to better understanding feeding practices inside the schools of the city. First of all, the study helps us comprehend eating habits in their symbolic and social dimension. Through the SRs identified in school actors of Mexico City public primary schools, we try to discuss the way in which the objectification and anchoring of these SRs, associated with school feeding and its overall orientation, can partly explain the availability and consumption of energy-dense foods. Therefore, in order to permanently and profoundly transform this supply, it is important to understand the SRs that sustain it and the processes that construct it. Secondly, it is important to consider the elements of cultural identity associated with food as well as the central role pleasure holds in eating practices. In a way, this article invites us to take into account the different facets of eating that contemplate necessities that are not only nutritional but also social and cultural, as well as to “think in system” terms (41), in other words, beyond the limits of each discipline. It is worth mentioning that two of the elements presented in national and international literature (13, 42) as central in the structuring of the relationship with food, which are concerned in part with time as a factor, have not been sufficiently explored. N. Herpin (43) analyzes how the time factor influences eating practices and their representations. Consequently, it would be necessary to identify in future projects how the time factor is or is not expressed in practices and discourses. Another important area that structures practices and social representations and that deserves to be explored in more detail in future projects relates to the weight and importance of advertising.

In addition, it is worth emphasizing that the data from this study was collected in fieldwork carried out during the year 2006, that is, before the media had communicated the 2006 National Health Survey results. After the survey results were released, the population was bombarded with statistics, information and advice for leading a healthy diet, which may have contributed to the modification and transformation of the SRs presented. With the understanding that these representations are not static and that they emerge from a struggle

between the different meanings attributed to a given practice/activity, it would also be interesting to study in depth how these SRs were formulated and reformulated by this hegemonic/medical discourse and what bearing they have on the adoption of healthy eating practices. In addition, regarding the comprehension of the influence that food availability has upon the construction of SRs, the current political

situation, with the recent approval of the school food guidelines and the changes subsequently introduced, offers an unprecedented opportunity to document and obtain a better understanding of the way in which this supply will condition the SRs and valuations of available foods, not only between children, but also among teachers, mothers and suppliers.

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## END NOTES

a. The following studies were realized: 1) an anthropometric study of 4th and 5th grade children; 2) a study characterizing physical activity within the school (measuring levels of physical activity carried out within the school); 3) a study of diet (inventories of the food present in school breakfasts and sold during break time, measurements of the food consumed during the school day).

b. According to the methodology developed by social marketing, formative research enables the production of information useful in designing and implementing an intervention based in knowledge of the target population and constructed from the point of view of this population.

c. 1) Breakfast at home, 2) at the start of the school day, purchasing food in the stands outside the school entrance, 3) the school breakfast 4)

during break, 5) at the end of the school day, purchasing food in the stands outside.

d. In most schools, food suppliers came in during the break, placed themselves in the schoolyard (up to almost 20 different sellers) and sold their products. In School B, suppliers delivered their products to the school, which were handed out by the children under the supervision of their teachers in a place available for such purpose. Furthermore, in this school, the sale of foods rich in refined flour and fat was limited and the consumption of vegetables, for example, in stews, was fostered.

e. In the fragments included in this article, the following abbreviations will be used: FAC for discussion group facilitator, INT for interviewer, and DG for discussion group.

f. [*Tortas*] Bread rolls stuffed with a bean purée, avocado, tomato, and usually cheese and/or ham.

## BIBLIOGRAPHIC REFERENCES

1. Rivera J, Irizarry L, González Cossío T. Overview of the nutritional status of the Mexican population in the last two decades. *Salud Pública de México*. 2009;51(supl 4):S645-S656.
2. Bonvecchio A, Safdie M, Monterrubio A, Gust T, Villalpando S, Rivera JA. Overweight and obesity trends in Mexican children 2 to 18 years of age from 1988 to 2006. *Salud Pública de México*. 2009;51(supl 4):S586-S594.
3. Barquera S, Hotz C, Rivera J, Tolentino L, Espinoza J, Campos I, Shamah T. Food consumption, food expenditure, anthropometric status and nutrition related diseases in Mexico. En: *The double burden of malnutrition: Case studies from six developing countries*. Rome: FAO; 2006.
4. Barquera S, Rivera-Dommarco J, Gasca-García A. Policies and programs of food and nutrition in Mexico. *Salud Pública de México*. 2001;43(5):464-477.
5. Muzzo B. Evolución de los problemas nutricionales en el mundo. El caso de Chile. *Revista Chilena de Nutrición*. 2002;29(2):78-85.
6. Fitzgerald N, Himmelgreen D, Damio G, Segura-Pérez S, Peng H, Pérez-Escamilla R. Aculturación, clase social, obesidad y factores relacionados con el estilo de vida en mujeres puertorriqueñas de bajos ingresos residentes del estado de Connecticut, Estados Unidos. *Revista Panamericana de Salud Pública*. 2006;19(5):306-313.
7. Kipke MD, Iverson E, Moore D, Booker C, Ruelas V, Peters AL, et al. Food and park environments: neighborhood-level risks for childhood obesity in east Los Angeles. *Journal of Adolescent Health*. 2007;40(4):325-333.
8. Hernández B, Gortmaker SL, Colditz GA, Peterson KE, Laird NM, Parra-Cabrera S. Association of obesity with physical activity, television programs and other forms of video viewing among children in Mexico city. *International Journal of Obesity and Related Metabolic Disorders*. 1999;23(8):845-854.
9. Stafford M, Cummins S, Ellaway A, Sacker A, Wiggins RD, Macintyre S. Pathways to obesity: identifying local, modifiable determinants of physical activity and diet. *Social Science and Medicine*. 2007;65(9):1882-1897.
10. Olivares S, Kain J, Lera L, Pizarro F, Vio F, Moron C. Nutritional status, food consumption and physical activity among Chilean school children: a descriptive study. *European Journal of Clinical Nutrition*. 2004;58(9):1278-1285.
11. Bedford A. Vending machines in schools: to ban or not to ban? *Public Health Nutrition*. 2006;9(2):274.
12. Story M, Kaphingst KM, French S. The role of schools in obesity prevention. *The Future of Children*. 2006;16(1):109-142.
13. Contreras Hernández J, Arnaiz M. *Alimentación y cultura. Perspectivas antropológicas*. Barcelona: Ariel; 2005.
14. Oseguera Parra D. *La cultura alimentaria de Colima*. México DF: Universidad Autónoma Metropolitana, Unidad Iztapalapa; 2000.
15. Bertran M. Significados socioculturales de la alimentación en la ciudad de México. En: Bertran M, Arroyo P, editores. *Antropología y nutrición*. México DF: Fundación Mexicana para la Salud, Universidad Autónoma Metropolitana; 2006. p. 221-235.
16. Kotler P, Lee N. *Social marketing: influencing behaviors for good*. 3ra ed. California: Sage Publications; 2008.
17. Bonvecchio-Arenas A, Théodore F, Hernández-Cordero S, Campirano- Núñez F, Islas A, Safdie M. La escuela como alternativa en la prevención de la obesidad: la experiencia en el sistema escolar mexicano. *Revista Española de Nutrición Comunitaria*. 2010;16(1):13-16.
18. Jennings-Aburto N, Nava F, Bonvecchio A, Safdie M, González-Casanova I, Gust T, et al. La actividad física durante la jornada escolar en escuelas primarias públicas en la Ciudad de México. *Salud Pública de México*. 2009;51(2):141-147.
19. Berger P, Luckmann T. *Construcción social de la realidad*. Buenos Aires: Amorrortu; 1968.
20. Bourdieu P. *La distinción; Critique sociale du jugement*. Paris: Minuit; 1979.
21. Fischler C. *El (h)omnívoro: el gusto, la cocina y el cuerpo*. Barcelona: Anagrama; 1995.
22. Moscovici S. *Psicología social*. Barcelona: Paidós; 1985.
23. Jodelet D. La representación social: fenómenos, concepto y teoría. En: Moscovici P, editor. *Psicología Social II*. Barcelona: Paidós; 1988. p. 469-494.

24. Lalhou S. Penser manger. Les représentations sociales de l'alimentation. Paris: Ecole des Hautes Etudes en Sciences Sociales; 1995.
25. Flores-Palacios F, Leyva-Flores R. Social representation of AIDS among students of Mexico City. *Salud Pública de México*. 2003;45(Supl 5):S624-S631.
26. Torres-López T, Sandoval-Díaz M, Pando-Moreno M. "Sangre y azúcar": representaciones sobre la diabetes de los enfermos crónicos en un barrio de Guadalajara, México. *Cadernos de Saúde Pública*. 2005;21(1):101-110.
27. Torres Lopez TM, Munguia Cortes JA, Pozos Radillo BE, Aguilera Velasco MD. Social representations on the health and disease of an adult population from Guadalajara, Mexico. *Atención Primaria*. 2010;42(3):154-161.
28. Meléndez Torres J, Cañez De la Fuente G. La cocina tradicional regional como un elemento de identidad y desarrollo local. El caso de San Pedro El Saucito, Sonora, México. *Estudios Sociales*. 2010;17:182-204.
29. Piñón Lora M, Cerón Hernández C. Ámbitos sociales de representación del cuerpo femenino. El caso de las jóvenes estudiantes universitarias de la ciudad de México. *Última Década*. 2007;(27):119-139.
30. Salguero Velázquez M. Ni todo el poder, ni todo el dominio: identidad en los varones, un proceso de negociación entre la vida laboral y familiar. *II Coloquio Internacional de Estudios sobre Varones y Masculinidades, I Congreso Nacional de la Academia Mexicana de Estudios del Género de los Hombres*; 19-23 jun 2006; Guadalajara, México. Guadalajara: Departamento de Estudios Regionales INESER, Centro Universitario de Ciencias Económico Administrativas, Universidad de Guadalajara; 2006.
31. Taylor S, Bogdan R. *Introducción a los métodos cualitativos de investigación*. Barcelona: Paidós; 1988.
32. Glaser B, Strauss A. *The Discovery of Grounded Theory*. New York: Aldine Transaction; 1967.
33. Moscovici S. *El psicoanálisis: su imagen y su público*. Buenos Aires: Huemul; 1961.
34. Jodelet D. *Representations sociales*. Paris: PUF; 1989.
35. González J. Más (+) cultura(s). Ensayo sobre realidades plurales. México DF: Conaculta; 1991.
36. Gracia-Arnaiz M. Comer bien, comer mal: la medicalización del comportamiento alimentario. *Salud Pública de México*. 2007;49:236-242.
37. Harris M. *Bueno para comer. Enigmas de alimentación y cultura*. México DF: Dirección General de Publicación del Consejo Nacional para la Cultura y las Artes; 1991.
38. Iturriaga J. Los alimentos cotidianos del mexicano o de tacos, tamales y tortas. En: Long J, editor. *Conquista y comida Consecuencias del encuentro de dos mundos*. 3ra ed. México DF: Universidad Nacional Autónoma de México; 2003.
39. Oseguera Parra D. El fast-food y el apresuramiento en México. *Estudios sobre las Culturas Contemporáneas*. 1996;II(3):109-35.
40. Jiménez Aguilar A, Mendoza Ramírez J. Frecuencia de consumo de alimentos (presencia en la dieta). En: Shamah T, editor. *Encuesta Nacional de Salud en Escolares Ciudad de México*. México: Secretaría de Salud, Secretaría de Educación Pública, Instituto Nacional de Salud Pública, Fundación Río Arronte, Fundación Banamex; 2010. p. 163-167.
41. Morin E. *Introducción al pensamiento complejo*. Barcelona: Gedisa; 2001.
42. Messer E. Globalización y dieta: significados, cultura y consecuencias en la nutrición. En: Bertran M, Arroyo P, editores. *Antropología y nutrición*. México DF: Fundación Mexicana para la Salud, Universidad Autónoma Metropolitana; 2006. p. 27-74.
43. Herpin N. Comportements alimentaires et contraintes sur les emplois du temps. *Revue Française de Sociologie*. 1980;21(4):599-628.

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