

REPRESENTATIONS OF EATING AND OF A NUTRITION PROGRAM AMONG FEMALE CAREGIVERS OF CHILDREN UNDER 5 YEARS OLD IN TIZIMIN, YUCATAN, MEXICO¹

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This study was carried out between January and April 2008 with 14 caregivers of children younger than 5 years residing in Tizimín city, Mexico. It aimed to understand the social representations of eating and the Programa Oportunidades [Opportunity Program] held by caregivers taking into account their social and cultural context. This qualitative investigation with an ethnographic approach was based on participant observation and semi-structured interviews. Two empirical categories emerged: 1) feeding and 2) an aid. The first refers to the caregivers' representation of eating patterns of children younger than 5 years and the second reveals that the program is considered an aid, which favors and helps caregivers to meet part of their needs. The study achieved the proposed objectives since it enabled us to understand caregivers in the complex task of feeding these children and also to propose strategies in several spheres to improve infant nutrition.

DESCRIPTORS: anthropology, cultural; culture; cultural characteristics; feeding; food; malnutrition; nutrition programmes; poverty

REPRESENTACIONES SOBRE LA ALIMENTACIÓN Y EL PROGRAMA DE NUTRICIÓN ENTRE MUJERES RESPONSABLES DE NIÑOS MEXICANOS MENORES DE 5 AÑOS

El estudio fue realizado con 14 responsables del cuidado del menor de 5 años en Tizimín, México, durante el período de enero a abril de 2008. Se buscó comprender las representaciones sociales de estas personas en relación a la alimentación y los componentes de nutrición del Programa Oportunidades, considerando el contexto social y cultural. La investigación cualitativa con abordaje antropológico, tipo etnográfico tuvo como base la observación participante y las entrevistas semiestructuradas, dirigidas a las responsables. De los resultados emergieron dos categorías empíricas: 1) dar de comer y 2) una ayuda. La primera se refiere a cómo las responsables representan la alimentación del menor de 5 años y la segunda reveló que el Programa es considerado una ayuda y que las apoya a solucionar, en parte, sus necesidades. Se alcanzaron los objetivos al comprender a las responsables en esa tarea compleja que realizan de alimentar a los niños y así proponer estrategias, en varias esferas, para mejorar la nutrición infantil.

DESCRIPTORES: antropología cultural; cultura; características culturales; alimentación; alimentos; desnutrición; programas de nutrición; pobreza

REPRESENTAÇÃO DA ALIMENTAÇÃO E DE PROGRAMA ALIMENTAR ENTRE MULHERES RESPONSÁVEIS POR CRIANÇAS MEXICANAS MENORES DE 5 ANOS

O estudo foi realizado com 14 responsáveis pelo cuidado de menores de 5 anos, moradoras da cidade de Tizimín, México, durante o período de janeiro a abril de 2008. O objetivo foi compreender as representações sociais dessas pessoas em relação à alimentação e ao Programa Oportunidades, considerando o contexto social e cultural. A investigação qualitativa, com abordagem antropológica, tipo etnográfica, baseou-se em observação participante e em entrevistas semiestructuradas, dirigidas às responsáveis. Dos resultados, emergiram duas categorias empíricas: 1) dar de comer e 2) uma ajuda. A primeira tratou da forma como as responsáveis representam a alimentação da criança menor de 5 anos e a segunda revelou que o Programa é considerado uma ajuda, promovendo benefícios e ajudando a solucionar parte de suas necessidades. O estudo permitiu alcançar os objetivos propostos ao compreender as responsáveis nesta complexa tarefa que realizam de alimentar tais crianças e, assim, propor estratégias, em várias esferas, para melhorar a nutrição infantil.

DESCRITORES: antropologia cultural; cultura; características culturais; alimentação; alimentos; desnutrição; programas de nutrição; pobreza

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INTRODUCTION

Feeding a child is not only a need but it is also a right that should be respected because the health and development a child achieves in his/her adult life partially depends on it. Social and cultural factors interfere and determine the way children are fed.

Nutrition in the children's first years of life is essential for their growth and development in multiple dimensions. When it is insufficient, it leads to malnutrition⁽¹⁾.

In developing countries, as in the case of Mexico, one out of four children younger than five years weigh below the recommended weight, which means that 146 million children under five years are underweight. Hunger and malnutrition are not only a consequence of a lack of food but also of poverty, inequity and political issues⁽²⁾. Mexico has a long history of developing programs and policies focused on improving the nutrition of vulnerable groups⁽³⁾.

The development of a system of subsidies provided to consumers and producers facilitated by interconnected agencies is among these strategies. Since 1997 the Federal Government has developed the *Programa Oportunidades* [Opportunities Program] previously called *Programa Progres*a) with an integral focus reaching about 300,000 families from the working class in rural areas⁽⁴⁾. Its main goal is to stop the transference of poverty from one generation to the other, mainly by establishing the foundations for this change to be permanent.

For the families to receive these benefits they have to regularly attend health outpatient clinics where they receive health care and nutritional guidance. The program also distributes food supplements to all children aged from 6 to 23 months and those underweight from two to four years of age in the selected houses.

Considering that children younger than five years old are very dependent on their caregivers, more vulnerable to disease and require more attention and affection, we consider it relevant to investigate some aspects, including cultural ones, which might play a predominant role in their nutritional practices. Such need is even more important if we consider that this is a phase when these children acquire more knowledge, strengthen habits, values and customs that, together, will contribute to their personal development. The following questions were put forward to promote reflection on the subject:

- What are the representations of eating held by female caregivers of children younger than five years according to their sociocultural context in Tizimín, Yucatán, Mexico?

- What are the meanings caregivers of children younger than five years attribute to the *Programa Oportunidades* in Tizimín, Yucatán, Mexico?

OBJECTIVES

To analyze the social representations female caregivers of children younger than five years attribute to food and nutrition programs considering their sociocultural context in the city of Tizimín, Yucatán, Mexico, identifying the following: sociodemographic characteristics of female caregivers of children younger than five years; meanings that caregivers of children younger than five years attributed to food; meanings attributed by those responsible for the *Programa Oportunidades*.

METHODOLOGICAL AND THEORETICAL REFERENTIAL

This study used Social Representation as the conceptual framework under the anthropological and sociological perspectives. Social representations constitute knowledge socially negotiated, contained in common sense used in the daily routine, which confer to people a view of the world and guide them in projects and strategies of action developed in their social context⁽⁵⁾.

The methodology was based on the qualitative approach from the anthropological perspective in which one seeks to understand ideas, meanings and representations attributed by the study's participants⁽⁶⁾. This ethnographic study aimed to describe the values, perspectives and science of a group that shares a culture, interpreting the meanings as a result of social interaction⁽⁷⁾.

From this perspective, eating habits and child nutrition are biocultural processes, that is, processes that are based on biology that uses food for metabolic processes but the processes are molded by culture. Food is crucial for human development in the first years of life, in which the child's social issues and sociocultural practices converge⁽⁸⁾. However, there are other factors that favor or limit children's nutrition,

such as: the family's income, maternal education, the reach of basic services, health care and sanitation⁽⁹⁾.

PARTICIPANTS

Fourteen caregivers of children younger than five years participated in the study. All those responsible for preparing meals, feeding and taking care of children most of the time, whether they were the mother, father, aunt or grandmother were defined as caregivers. The great majority of caregivers participating in this study were mothers and only one child was cared for by a grandmother. Each caregiver corresponded to only one child, whose eating habits were evaluated even if the same caregiver was responsible for other children.

The caregivers live in Module 8 and are cared for in the Health Unit of the Nursing School in Tizimín, Yucatán, Mexico. There are, in this part of the city, families who live in poor or very poor conditions, with informal or temporary jobs, whose members are illiterate or with a low level of education. We also observe that there is a mixture of urban and rural behavior since it is located in the city's peripheral area.

The number of interviews is based on theoretical saturation criterion⁽⁶⁾. The study used convenience sampling, in which caregivers and children with the following characteristics were intentionally sought: a) children's age (younger than five years); b) children's level of nutrition (with malnutrition); c) caregivers' level of education (able to read and write and not able to read or write) and d) be covered by the *Programa Oportunidades*.

Caregivers and children were selected through consultation with the microdiagnosis unit in the health unit, which contains demographic and health data. Afterwards, the selected individuals were visited at their homes and invited to participate in the project, which had been previously approved by the Research Ethics Committee according to Mexican law. Participants were given a free and informed consent agreement, which informed them of the study's objectives and the participants' freedom to agree to or decline to participate in the study and withdraw at any time without harming access to health services to which they are entitled. Participation was voluntary and they received no compensation.

Data were collected between January and April 2008. Participant observation was first carried out in the participants' houses using a script that included: a) children's eating habits before, during and after their regular meal times; b) the kind of food the children ate; c) time, quantity and family interaction that happened before, during and after meals. Semi-structured interviews were then carried out according to time and day indicated by the caregiver. A thematic script, previously developed with the following themes, was used to guide the interview: a) nutrition for children younger than 5 years; b) main knowledge, customs and practices that surround the nutrition of the child younger than 5 years and c) meaning of the *Programa Oportunidades*. Interviews lasted two hours on average, were recorded and then transcribed and stored in a Word file.

The material analysis implies the organization of data, dividing it in parts, seeking for tendencies, convergences and divergences, using the principles and procedures of content analysis⁽⁶⁾. Collected data were compared with the theoretical framework in order to establish links between theory and empirical results.

RESULTS AND DISCUSSION

The study's results were divided into two main parts: the study's context – conditions in which caregivers and children younger than five years live – and understanding of the representations of food and the nutrition program according to the caregivers' perspective.

Study's setting

The investigation permitted identifying various aspects related to the study's setting, though only those with greater representation in the investigated context will be highlighted.

Of the 14 caregivers responsible for caring and feeding children younger than five years who participated in the study, 13 were the mothers themselves who cared for and fed the children and only one of them was the child's grandmother. Ages of caregivers varied from 21 to 50 years. The ages of children whose food was provided by caregivers was analyzed at the moment of data collection and is as

follows: two were younger than six months, two were between seven and 11 months, four were one year old, three were two years old, one was three and two were four years old.

Among the sociodemographic characteristics catalogued is whether the family is nuclear or extended: a nuclear family is composed of parents and dependent children and the extended family includes grandfathers, parents-in-law, uncles, cousins, among others⁽¹⁰⁾. It is important to highlight that extended families were more prevalent and played an important role in children's eating habits, considering that, according to what was observed and learned during the interviews, this kind of family provided economic support, positively shared spending related to food in addition to organizing themselves to do the groceries, preparing meals, feeding and taking care of children, thus, they in fact helped the caregiver.

Social and economic conditions in which caregivers live were similar since they all lacked financial resources to meet basic needs for food, health, education and housing. They lived in poor and very poor conditions and were humble, sincere and friendly people.

Weekly spending on family meals was approximately 400 pesos (30 dollars), which is considered limited for all families, and is a threat to children who present a high risk of malnutrition and to those already malnourished, who could have their situation aggravated. We observed that there were families who received support from different programs. In these cases, it was easier to avoid having children who suffered from malnutrition and, in case they did, they would be able to recover, since each program promotes different actions directed at families.

In relation to schooling, the fact that caregivers were literate (know how to read and write) enabled them to have more opportunities to seek and obtain support, create networks, make better use of resources and improve them when compared to illiterate caregivers.

Another factor that stood out and which favored an appropriate supply of food to all children was the number of working people in the family – a larger number of family members supporting the family's spending allowed a better supply of food to children. Therefore, there is agreement between studies that report that family members share their

strengths and weaknesses as well as meanings and knowledge they have about themselves and their reality⁽¹⁰⁾.

The number of children was also a relevant characteristic, since it suggests potential association with malnutrition according to what was observed in one family with six children. In that case, two children, an one year-old child and her three year-old sister, suffered from severe malnutrition.

We also observed that some caregivers breastfed children older than one year and, due to the lack of food, complemented their nourishment with small quantities of flour-based food such as corn and rice tortillas so as to alleviate hunger.

We also observed that some families, which occasionally had extra financial resources, preferred to buy processed food such as: sausages, juices, cereals and candies among others. Thus, nutritional education provided to caregivers is needed so they have the information and motivation required to improve the quality of children's diets and health⁽¹¹⁾.

Understanding representations about food and the nutrition program in its cultural context

Different sociodemographic characteristics were considered, which resulted in the construction of two empirical categories: 1) *feeding* and 2) *it's an aid*.

The category *feeding* contains meanings that caregivers attribute to eating, knowledge, habits and practices that they perform when feeding the child younger than five years as well as the relationship they establish between the child's eating and health. Among the actions they performed at the moment of feeding the child are: offering food in certain times during the day and observing children so food would be ingested in a way it would not cause harm to children's stomach and they would get satiated and satisfied. These practices are usually learned from their mothers or mothers-in-law according to a study carried out in Chile⁽¹²⁾.

For the caregivers with less financial resources, the main concern was to have food to feed the children regardless of the kind of food. When they fed them, they would feel at peace with a feeling of having fulfilled their responsibility.

The lack of financial resources to buy nutritious food was one of the situations that hindered caregivers in providing correct meals, that is, complete,

balanced, innocuous, sufficient, varied and adequate meals. These characteristics, though they were familiar to some of them, especially for those attending the *Programa Oportunidades* or some other health program, were not put in practice given their financial restrictions.

A small number of caregivers ate and fed their children fruits and vegetables grown in gardens and orchards supplementing their food. This practice shows that natural resources available in the domestic environment can be used to improve eating.

Among the foods reported as good, milk was the most valued and therefore, caregivers made an effort to buy it because they considered it to have more vitamins and nutrients needed for child growth in addition to calcium that contributes to the formation of bones. In relation to processed foods, the caregivers made an effort to buy them despite the high cost, believing that such products would help children grow and contribute to warding off diseases. On the other hand, the consumption of natural foods with higher nutritious value was almost null.

A reduced group of families consumed *chaya* (a plant grown in the state and rich in protein) prepared as *chanchac*, that is, a broth of chaya and ground pumpkin seeds and lemon accompanied by *gorditas* (salt bread made with corn, butter and baked in grids, which in Mayan, are called *pimes*). Based on this, disseminating the nutritious and medicinal properties of *chaya* to different actors (politicians, educators, health professionals, economists and others) related to health and diet is needed so that *chaya* becomes an important component of feeding programs and further research about this plant is carried out so its different properties are established.

Among the beliefs of caregivers, broths predominated as a main food of great value to health. Another aspect to be highlighted was the fact that caregivers do not concomitantly offer fish and milk because they believed these two foods together would cause *mal de pinto* (disease caused by a bacterium that causes spots on the skin) in children or adults. Thus, due to this belief, children were deprived of an important food.

In relation to characteristics identified in ill children, caregivers reported that when children get sick they do not want to eat, play, run or walk, do not have energy, are apathetic and oblivious, want to be held, cry and sleep a lot, are sad, troubled and *chic nak* (a state of mind described by the Mayans to

indicate an aggressive and withdrawn child); they also identify these children as underweight, and who require a slow recovery process.

The category of analysis *it's an aid* refers to the way caregivers represent the *Programa Oportunidades*.

Firstly, caregivers considered the *Programa Oportunidades* to be an aid for families who need it. It was considered a good program to the extent it supported eating and health both for the child and the family as it provides different areas of support such as in health, food, education and energy expenditure (electricity, coal and water). Such findings coincide with the results of a qualitative study performed in nine States of Mexico⁽¹³⁾.

Caregivers had to show, through compliance in their actions, that they acknowledged that the support received from the program was for the benefit of their families, which they considered a fair agreement. It is worth highlighting that the program has helped many families, residents and communities to improve their health condition. Other families, however, complied with the Program's actions because they had to or because they felt pressure to, otherwise the money received every two months would be reduced or they could even permanently lose the support received.

In the face of this scenario, we suggest that health professionals organize collective activities jointly with caregivers (those benefiting from the Program): to supervise areas as a preventive measure against dengue, to clean the health unit, to support canine vaccination campaigns, among others, so all feel encouraged and participate according to their availability. Another relevant aspect is to train teachers on subjects related to eating habits so they can teach children older than three years who are already in pre-school. Teachers should also be trained in techniques that assess children's nutritional conditions so they can cooperate with nutritional surveillance and the promotion of health eating.

In relation to self-care activities in health (health practices), caregivers acknowledged that such activities help them a lot so they learned how to care for children when they were healthy, sick or how to feed them.

Summarizing, we can say that the *Programa Oportunidades* meant *an aid* for the caregivers who lived in poor or very poor conditions, which was common to all of them.

FINAL CONSIDERATIONS

This study permitted us to find the representations caregivers hold regarding eating, the values attributed to foods that they ate themselves or gave to children. Practices generally used when feeding children as well as the way they related eating to the children's health were based on their cultural beliefs.

Another noteworthy aspect was the caregivers' lack of specific knowledge about children's eating such as breastfeeding, weaning, characteristics of healthy eating, the importance of eating different groups of foods and knowledge about their functions, and the relevance of identifying early signs of malnutrition, among others.

Some findings suggest that malnutrition is beyond the family and local context because it is a social, historical, economic and political problem and mainly affects children, making them more vulnerable to illness. Thus, continuing to sensitize political, educational and health authorities, among others, is a way to find strategies that help to improve the families' financial conditions and to persist in investing in nutrition and health programs to feed children and support all families that depend on them.

It is important to consider that even though the foods composing the *Programa Oportunidades* represent an aid for caregivers, the poor and extreme poor conditions in which these families live mean the received support is insufficient to effectively improve these children's nutrition and health.

In comparison to other studies⁽¹⁴⁻¹⁵⁾, this study contributed to determining more objectively how relevant culture is, in this case Mayan culture, in influencing the caregivers' decisions as to what children eat or do not eat and whether children younger than five years are fed or not, taking into account their beliefs and values about food. Such findings will enable health professionals to consider the right moment to offer guidance on nutrition and avoiding a reversion to unscientific beliefs, instead reinforcing those that advantage children's nutrition and health. On the other side, this study demonstrates that being part of a nutrition program and counting on its benefits is not sufficient to overcome children's eating problems (e.g. malnutrition). It is necessary to consider the context of family life, poverty in which families live in addition to customs and beliefs held by caregivers about how to feed children younger than five years. Such situations overlap the support

provided by the *Programa Oportunidades*, which by itself, is insufficient to overcome the problem⁽¹⁵⁾.

Thus, the malnutrition problem is a great challenge that requires ongoing and joint participation of the different social sectors involved with a view to solve children's nutrition problems.

Therefore, sharing, joining efforts and working together to offer help to these families and their children is needed so they have an improved quality of life, health condition and a brighter future. In this perspective, we present some proposals to be considered by the different areas according to their responsibilities.

Health Area

To form interdisciplinary teams and quality control people who work on eating habits and nutrition for children younger than five years in the primary care units. To offer self-care practices to caregivers of children younger than five years. To include in health education programs subjects such as self-esteem and personal development that offer caregivers strategies to overcome problems and perform activities that benefit their own health and that of their families. To develop guidance scripts directed to health professionals and caregivers about eating, focused on these children. To encourage children and families to include *chaya* and soy in their diet. To support and enable the inclusion of needy families in other social programs, regardless of their participation in the *Programa Oportunidades*.

Educational Area

To enhance the literacy of adult women so they have more tools to take care of children. To teach children older than three years who are already in school about the importance of healthy eating and work, jointly with the health personnel, in the development of healthy menus for breakfast in schools.

Political Sphere

To support professionals who aim to provide social services in rural communities, giving them support for eating, living and transportation. To supply material for the growth of vegetable gardens so as to develop better use of natural resources and to keep investing in social programs including free supply of milk.

Civil Society

To support the most needy families, encourage and create groups of parents in order to provide instruments to overcome problems with a view to meet the needs of these families.

Scientific Community

To develop studies that allow the understanding of customs, habits and beliefs of health teams, pregnant

women or those breastfeeding concerning problems faced in breastfeeding. To encourage studies that permit knowing the meanings and values attributed to health and illness by the rural Mayan population, those responsible for traditional medicine and health personnel. To update bromatological studies (chemical composition) on the *chaya* plant to prove its nutritious and healing properties. To qualitatively and continuously evaluate the *Programa Oportunidades* in order to better understand the problems it presents during its operation.

REFERENCES

1. Torre P, Salas M. Contribución a la comprensión de la alimentación infantil. En: Bertran M, Arroyo P, editores. *Antropología y nutrición*. México: Fundación Mexicana para la Salud, A.C. y Universidad Autónoma Metropolitana; 2006. p. 257 - 75.
2. Ortiz-Andrelluccu A, Serra-Majem L. ¿Desnutrición infantil en el mundo: sentimiento de culpa o de vergüenza? [revisión]. *Acta Científica Estudiantil*. 2007; 5(3):109-14.
3. Rodríguez S. Efectividad de los programas de alimentación y nutrición en México. *Salud Pública de México* 2007; 49 (Esp):241
4. Sepúlveda J, Bustreo Fv, Tapia R, Rivera J, Lozano R, Olaiz G, et al. Aumento de la sobrepeso en menores de cinco años en México: la estrategia diagonal. *Salud Pública de México* 2007; 49(Su1):110-25.
5. Queiroz M. Representações sociais: uma perspectiva multidisciplinar em pesquisa qualitativa. In: Barata R, Briceño-León R, organizadoras. *Doenças endêmicas: abordagens sociais, culturais e comportamentais*. Rio de Janeiro: Editora Fiocruz, 2000. p. 27-46.
6. Minayo M. O desafio do conhecimento. *Pesquisa qualitativa em saúde*. São Paulo: Abrasco; 2005.
7. Álvarez-Gayou J. *Cómo hacer investigación cualitativa*. Fundamentos y metodología. México, Buenos Aires y Barcelona: Paidós, 2003. p. 76.
8. Torre P, Salas M. Contribución a la comprensión de la alimentación infantil. En *Antropología y nutrición*. Ed. México: Fundación Mexicana para la Salud, A.C. y Universidad Autónoma Metropolitana, 2006. p. 257.
9. Monteiro CA, Benicio M, Konno S, Silva A, Lima A, Conde W. Causas do declínio da desnutrição infantil no Brasil, 1996-2007. *Rev Saúde Pública* 2009; 43(1):35-43.
10. Pelcastre-Villafuerte B, Riquer Fr, León V, Reyes H, Gutiérrez G, Bronfman M. ¿Qué se hace para no morir de hambre? Dinámicas domésticas y alimentación en la niñez en un área rural de extrema pobreza de México. *Salud Pública de México* 2006; 48(006):490-7.
11. Jaime P, Machado F, Westphal M, Monteiro CA. Educação nutricional e consumo de frutas e hortaliças: ensaio comunitário controlado. *Rev Saúde Pública* 2007, 41(1):154-7.
12. Osorio J, Weisstaub G, Castillo C. Desarrollo de la conducta alimentaria en la infancia y sus alteraciones. *Rev Chil Nutr* 2002; 29(3):280-5.
13. Secretaría de Desarrollo Social [Sitio de internet]. México: Oportunidades Evaluación Externa; 2002 [acceso 11 de julio de 2008]. De Escobar A, González M. Evaluación cualitativa del Programa de Desarrollo Humano Oportunidades Seguimiento de impacto 2001 - 2002. Evaluación de Resultados de Impacto del Programa de Desarrollo Humano Oportunidades diciembre de 2002. Disponible en: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=336139>
14. Barbosa LC, Martins MC, Silva VAG, Carvalho QCM. Dor na criança desnutrida: percepção da mãe. *Rev Latino-am Enfermagem* 2005; 13(4):596-8.
15. Frota MA, Barroso MGT. Repercussão da desnutrição infantil na Família. *Rev Latino-am Enfermagem* 2005; 13(6):996-1000.