The influence of family on complementary feeding: reporting experiences

Abstract

The introduction of a timely and appropriate complementary feeding is challenging for health professionals in the context of primary care. The World Health Organization recommends exclusive breastfeeding until the sixth month of life and breastfeeding inserted in complementary foods up to two years or more. The nutritionist, as a member of the Family Health Supporting Center (NASF), plays a key role in the nutritional aspects of 0-2-year-old children and should know the family eating behavior to identify habits and work with the family. This study has aimed to discuss the influence of family behavior on the introduction of complementary foods for children and their consequences on child development by means of the report of two cases of experiences of children under two years of age treated by NASF’s nutritionists. In the first case, it was difficult to introduce complementary feeding due to eating habits built over time by the family, leading to low birth weight in children. The second case showed early weaning and the early introduction in large quantities of cow’s milk, due to concepts assigned by the mother about children’s healthy eating patterns, which caused constipation in children. Although the implications for health are widely known, changing eating habits is a challenging task. We conclude that the management of infant feeding is strongly influenced by family and environmental contexts, and considering these factors it is relevant in the nutritional approach to mothers.

Key words: Feeding Behavior; Anthropology; Breast Feeding; Supplementary Feeding; Family Health Strategy; Weaning.
Introduction

The introduction of an appropriate complementary feeding in a timely manner is a challenging issue for health professionals in the context of a Primary Health Care (PHC). The World Health Organization (WHO) recommends exclusive breastfeeding until the sixth month of life. After this period, the introduction of new foods must be carried out, since breast milk does not provide all the nutrients required for the child’s healthy growth anymore.1

To select the foods to be offered as complementary feeding, mothers base their choices according to cultural, social and subjective aspects, these being their own or their surroundings’. In addition, the media also has an important role as guiding the infants’ feeding. There are several advertising campaigns claiming that highly processed foods are rich in vitamins, minerals and energy. However, ingredients such as preservatives, colorings, and acidifiers, which are harmful to health, are disregarded.2

In this context, families’ eating habits, the parents’ knowledge and affective dimension are going to gradually modulate the children’s taste and food preferences, teaching them to like what they have learned to eat.3-5 For most parents, the food offered to their children is the one with high nutritional quality, besides being very palatable. However, studies show frequent and early use of non-suitable food for the age, such as those high in sodium and fat. As a result of this food, children have been showing chronic noncommunicable diseases (NCDs) at increasingly early ages and the incidence of cases is increasing. About 35% of Brazilian children are overweight/obese and of three children in this situation, one is going to become an obese adult.6 In this process, encouraging the construction of eating habits and adopting new practices impose the need to broaden the look from different disciplinary perspectives, due to food processes being multifaceted.7-8

PHC has great importance in encouraging this process of change, because medical consultations for children are usually carried out at this level of health care, which makes mother and baby have several meetings with health professionals. But it is seen that complementary feeding instructions are not always carried out focusing the person, considering their desires, difficulties and life context, and often dietary guidelines are superficially carried out. In the whole multidisciplinary team of PHC, doctors and nurses are the professionals of reference for the children and their families in childcare medical consultations. Other professionals are required only in cases that require specialized care.9

An example of this is the professional nutritionist, which is part of the Brazilian government Núcleo de Apoio à Saúde da Família (NASF; Support Center for Family Health), consisting of different health care categories that work seamlessly and support professionals of the Family Health Teams. The nutritionist acts with the family, considering the socioeconomic, cultural and
behavioral issues, focusing on promoting healthy eating and preventing nutritional deficiencies, malnutrition and obesity.\textsuperscript{10-13} And in terms of these children’s feeding care, knowing the family’s eating behaviors enables the identification of habits and working with the family.\textsuperscript{7}

For many health professionals, it can be challenging to understand the influence of attitudes, beliefs, values and practices on the individuals’ and communities’ eating habits. NASF’s composition, with technical skills that complement each other, can foster discussions under a biopsychosocial perspective. In this sense, the presence of professionals such as psychologists and social workers in the teams enriches the cases analyses and broadens the nutritionist’s look with contributions from the humanities and social sciences.

In general, studies on nutrition express the biomedical paradigm hegemony that, in turn, manifests in the prevailing health practices. These express a world view in the logic of the natural sciences which epistemologically limits the recognition of the entire food issue as a cultural and social act.\textsuperscript{14} Thus, the issue of eating habits should be understood in conjunction with practices of different social groups, with care not to particularize nor isolate them from the determinants of socioeconomic order and ideological nature of society.\textsuperscript{15}

The approach of anthropology and nutrition allows the nutritionist to broaden the understanding of sociocultural aspects that underlie their work with the public served by the PHC. According to Canesqui & Garcia,\textsuperscript{4} the way people eat always exceeds the act of eating itself and coordinates with other social dimensions and the identity. The search, selection, consumption and prohibition of certain foods exist in all social groups and are guided by different social rules and loaded with meanings. In this sense, Braga\textsuperscript{16} states that “eating is not merely a biological activity.” Likewise, the reasons are not strictly economic, and food and eating are, above all, social and cultural phenomena. This understanding is crucial in the analysis of food practices adopted by families.\textsuperscript{4}

In the theoretical field of food and nutrition, there is a distance from nutritionists from their education, the people’s actual food issues and the human act of feeding, and this act is loaded with meaning that goes beyond the disease prevention proposal.\textsuperscript{14} According to Minayo,\textsuperscript{17} the importance of anthropology to understand health-related aspects is undeniable and any action of prevention, treatment or health planning needs to take into account a population’s values, attitudes and beliefs. Anthropology helps in understanding the subject’s reality, interfacing social sciences and health, thus contributing to the health professional addressing the individual and the family.

In this sense, Contreras & Gracia claim that a constant dialogue is necessary between anthropology, sociology, nutrition, and gastronomy, among other subjects which are devoted to human consumption.\textsuperscript{18} A fundamental principle in the proposal for a multidisciplinary approach to food and nutrition is that human eating choices and habits are determined by interactions between various factors, which are not limited to strictly nutritional or, ultimately, biological aspects.\textsuperscript{19}
This paper aims to discuss the influence of family behavior on introducing complementary food to children and its consequences on child development by a report on two experiences of cases of children under two years of age treated by NASF professionals. It does not intend to exhaust the topic, but aims to signal some aspects that may be involved and be addressed in professional practices to support mothers and family members of infants younger than two years.

**Methodology**

It is a descriptive and observational study of two cases followed up by Brazilian government Family Health Teams (ESF) with support from NASF at the SUS (Brazilian Unified Health System) network of the city Belo Horizonte, Minas Gerais, in areas of high risk.

The municipality of Belo Horizonte has 149 UBS [Unidades Básicas de Saúde (Government Basic Health Units)], 585 ESF and 58 NASF teams divided among nine health district (Barreiro, Centro-Sul, Leste, Noroeste, Noroeste, Norte, Oeste, Pampulha, and Venda Nova) with risk classification based on the IVS [Índice de Vulnerabilidade à Saúde (Health Vulnerability Index)]. This index was created in 1998, preceding the implantation of the ESF in 2002, and revised in 2003, from the information by the Instituto Brasileiro de Geografia e Estatística (IBGE; Brazilian Institute of Geography and Statistics) 2004 census. The calculation considers population-based indicators, such as housing and income, as health indicators. According to this index, the areas are classified into low risk, medium risk, high risk and very high risk. As it expresses a negative attribute – a population’s health vulnerability – the higher its value, the more vulnerable is the population to fall ill and die.²⁰

The cases at hand were discussed and forwarded by means of a meeting for support performed by professionals and various specialized areas given to an interdisciplinary team in order to expand the field of activities and qualify their actions, monthly held with the reference teams. The data presented relate to monitoring conducted in 2014 until the first half of 2015. A survey of the secondary information recorded in electronic medical records was conducted, as well as other documents produced and used in the work process of NASF (summary of the case, life history, family genogram, Single Therapeutic Project, developments of outpatient and home care).

Finally, this information was compiled and compared in order to highlight the intercession of each professional’s experiences in conducting the case and between their evolution in the period of intervention. Both cases illustrate the familiar and professional management of complementary food introduction to children under two years of age and cultural elements that permeate the meanings assigned by the families’ popular knowledge and the health professionals’ technical knowledge.
Experience Report

Case 1

Preterm children (36 weeks) sent to NASF aged one year and ten months by the ESF of a Basic Health Unit (UBS) in the city of Belo Horizonte, after the mother’s report of difficulties with the complementary feeding during childcare medical consultations. Such unit is located in an area of high risk in the city South-Central area, serving a population of a community called Vila Novo São Lucas, belonging to Aglomerado da Serra (a set of villages and slums located in the South-Central area of Belo Horizonte). The family is followed up by the NASF team since 2013, from the clinical diagnosis of tuberculosis for an uncle of the child in question.

The mother is an adolescent and had seizures during pregnancy. During consultations with ESF, she received guidance on breastfeeding and complementary feeding. In a transfontanellar ultrasound exam\(^{a}\) of the child at birth, hypomyelination was observed,\(^{b}\) and follow up was held with a neurologist doctor for two months, when the image exam result was shown to be normal. During the first year of life, the child was frequently seen at the health center, due to several episodes of respiratory symptoms (coughing, wheezing and colds), and insufficient weight gain. According to the consultations, the child had an adequate neurological and psychomotor development in the period.

In the first nutritional consultation, the mother tells that the child spits the food at any consistency. The child accepts well only breast milk. The infant lives with the grandmother and eight uncles and aunts. Seven are children or adolescents and one receives a government work incapacity benefit. The family also receives an aid from the Programa Bolsa Família (Family Allowance, a Brazilian government social welfare program, part of the Fome Zero network of federal assistance programs)\(^{c}\) related to four minors. The family’s food routine showed low fractionation,

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\(^{a}\) The transfontanellar ultrasound examination is performed through the baby’s fontanel (soft spot) and is used to identify lesions in the brain structures associated with subsequent neurological morbidity, such as bleeding or malformation.

\(^{b}\) The term “hypomyelination” is the deficiency in the production of myelin of the central or peripheral nervous system, which can cause neurological manifestations such as neurological and psychomotor developmental delay, hypotonia, epilepsy, dysmorphisms, among others.

\(^{c}\) Programa Bolsa Família, instituted by Act 10836/2004 and regulated by Ruling 5209/2004, is a direct income transfer program that benefits families in poverty and extreme poverty in Brazil, with a per capita income below BRL 77 a month. Bolsa Família has three main axes: the transfer of income that promotes immediate relief of poverty; conditionalities that reinforce access to basic social rights in the areas of education, health and social care; and the complementary actions and programs aimed at developing the families, so that beneficiaries are able to overcome the vulnerable situation. Every month, the federal government deposits a sum for the families that are part of the program and such an amount depends on the family size, the age of its members and their income.
schedule irregularity for meals and a reduced food variety. The child’s anthropometry showed weight maintenance in relation to the last childcare medical consultation. The mother reported loss of 2 kg in recent months and that the child has been waking up hungry during the night due to not eating in the evening. During the consultation, the fact that the child constantly demanded to be breastfed stood out and the mother would comply. At a meeting for support performed by professionals and various specialized areas given to an interdisciplinary team in order to expand the field of activities and qualify their actions, the importance of information about the family context was mentioned and a visit was decided upon, as well as an evaluation of the child by a speech therapist to assess the child’s swallowing. In a conversation with the mother, the speech therapist found that the child was sleeping many hours in the afternoon and little at night, being breastfed several times during the night. Furthermore, the mother’s desire to work was identified and her difficulties due to speaking very low because of shyness. This one reported that she had recently gotten an opportunity, but was afraid of losing it because of the situation.

In a home visit, the nutritionist talked to the matriarch about her life story and she told about the beginning of her married life. Her domestic partner (consensual husband) was a coal miner and would constantly move around the municipalities of the Brazilian state of Minas Gerais because of his work, having a nomadic lifestyle. With this, both she and the children had very irregular routines, including food, sleep and access to basic health care. Three of their children died with less than two years of age. Her husband died young and the matriarch raised her children by herself, settling in Belo Horizonte. Currently, she is devoted to caring for her son, who is monitored by a Reference Center for Mental Health, and she says he has little autonomy. Thus, the matriarch has difficulty in organizing the family routine.

In the house, a table for having meals was not identified and the people present reported that they were not used to having any of the meals together. The child’s mother reported that it is very common for her to forget to eat and wake up hungry. Thus the family genogram\textsuperscript{d} was built, which allowed a better understanding of the members’ different routines.

During the monitoring, were raised as possibilities for the Family Therapeutic Project: the provision of support for the infant’s mother’s retention in the new job, which would reduce the use of breastfeeding as comfort for the child and bring benefits to the maternal nutritional status and family income; enrolling the child in a Municipal Unit of Early Childhood Education (UMEI), in order to provide the child’s socialization with other children and the possibility of

\textsuperscript{d} A genogram is a clinical tool that enables a quick and comprehensive view of family structures, composition, health problems, risk situations and vulnerability patterns, constituting a relational map where relevant data in the case are recorded.
establishing a feeding routine, encouraging experimentation of food in different consistencies; and the organization of a sleep routine that would be proper to the activities for mother and child.

Case 2

Child, female, one year and two months old, sent by the ESF to a nutritionist at NASF due to intestinal constipation. The user’s UBS is located in northern Belo Horizonte in an area of high risk. The child started having a nutritional monitoring in the beginning of 2015.

A healthy child, with no comorbidity, and neurological psychomotor development consistent with age. On physical examination, eutrophy was shown, with an ideal weight for the age. The child’s dietary history showed early weaning at 30 days of life, since the mother claimed to have been producing unsatisfactory amounts of milk. Therefore, the child was fed infant formulas. At five months of age, sweet porridge was introduced in the infant’s feeding, and at six months, lunch and dinner. At the same time of food being introduced, the child started the consumption of cow’s milk. However, the child’s feeding pattern remained virtually unchanged until the age of one year and two months, and five 200-ml bottles of milk with milk flour were daily offered to the child.

A week before the visit, the child began to attend a full time day care center, where all food would be offered to the children, except for dinner. The menu consisted of two snack times with fruit, a snack time with bread or cake and a baby bottle with pure milk. As for lunch, it would have rice, beans, meat and raw and cooked vegetables. Thus, the child, on the day of the consultation, had already shown improvement in terms of the constipation and was already daily evacuating pasty and smooth stool.

The mother said she was single and had five more children, all living in the same house. The child did not receive child support from the father. This one would only help to buy milk and diapers. The family as a whole lived in conditions of food insecurity and the inclusion of fruit and vegetables in the diet was infrequent. But the consumption of cookies, whole milk, bread, milk flour and artificial juices was frequent.

The nutritionist’s intervention focused the introduction of fruit and vegetables and the adequacy of the number of milk portions, in addition to decreasing the caloric density of these. It should be remembered that the guidelines provided would be applied mainly on weekends, since the food offered at the day care center was balanced.

The child had regular consultations with the nursing staff and the pediatrician. And the mother believed that, by providing multiple servings of milk a day, she would be offering a balanced and nutritious diet to her child.
Discussion

Children’s eating behavior, from breastfeeding to the family’s daily diet, is not determined only by their biological needs, but by their interaction with food and by emotional, socioeconomic and cultural factors and the family’s learning and experiences.24 The domestic environment, the parents’ lifestyle, inter-family relations and cultural involvement can have great influence on nutrition and food preferences. Therefore, the family has a decisive role in teaching socially acceptable habits and in forming new habits in food intake and a pattern of feeding behavior.25–28

From the biological point of view, breast milk is a unique combination of ingredients and has a lower energy density and higher carbohydrate content compared to milk from other mammals. Comparing with the cow’s milk composition, which is the base used in the preparation of the majority of infant formulas, insufficient amounts of vitamin E, iron, and essential fatty acids and excessive amounts of calories, protein, potassium and sodium are identified. Therefore, children with early introduction to cow’s milk are more likely to have anemia and other nutritional deficiencies, risk of dehydration, gastrointestinal tract infections, constipation, increased weight gain (which may predispose to obesity), insulin resistance (which may predispose to diabetes) and lower cognitive development.25, 26, 29–32

Regarding constipation, there are several factors that are related, such as: constitutional, hereditary, food and psychological or emotional, combined or not with a disorder of intestinal motility.32–35 Several studies have shown that constipation occurs with high frequency in the pediatric population. A study of children up to two years old in Brazilian city São Paulo has shown that constipation was more frequent between 6-24 months (38.8%) than in the first six months of life (15.1%). And artificial feeding was presented as 4.5 times more likely for the infant to present constipation in relation to predominant breastfeeding.

Evacuation frequency in infants in breastfeeding is greater than that for artificial feeding. Motilin, present in breast milk, may be one of those responsible for the difference in bowel habits. Another aspect relates to the good digestibility of human milk lipids in relation to formulas, which favors the formation of less consistent feces. Breastfeeding should be considered as a protective factor against the development of constipation.32

Another dietary factor that can influence the development of constipation in infants is the dietary fiber content in weaning foods and the introduction of complementary feeding.32, 33 Case 2 showed that the inappropriate introduction of complementary food with low variety (excess of cow milk with milk flour) associated with low fiber intake and early weaning caused a nutritional disorder in the child, with constipation.24 As for the late introduction of complementary foods to breast milk, it can cause physical and cognitive deficits in children. Their nutritional needs are
going to be met with a varied diet and in sufficient quantity, and breastfeeding is one of several food intakes that children are going to consume. This fact has occurred with the child in Case 1.

In this sense, the case reports presented portray some of the nutritional problems caused from the complementary food introduction, either by exclusive breastfeeding for a long time, delaying the introduction of other foods, either by early weaning, substituting breast milk by cow’s milk at various times, with repercussions on the child’s intestinal rhythm. This causes, in addition to nutritional losses, social problems, such as the mother’s in the first case, where the attachment to a job was in check partly by the child’s nutritional and emotional demands.

To understand the cases and to best address them, the importance of the human sciences was noticed, especially anthropology, to support actions that support families’ health care from early childhood, trying to understand the person, the family and the social and cultural contexts and providing instruments to understand this.16

In society, mothers are seen as the person who feeds the child, allowing growth and development.36 Some studies show, in parallel, that the decisions to breastfeed and wean can be felt as a personal, guilty, lonely and symbolic process. Weaning can mean, for mothers, a detachment from the child, a sense of leaving the child behind and the creation of a “space” between them and the child, to be filled by other caregivers. The experience of separation between mother and baby felt during weaning causes in women not only the experience of a conflict and feelings of guilt and anguish, but also the sense of symbolically losing the child. Symbolically, the act of breastfeeding reaffirms the maternal moral duty and responsibility, proving to be an “iconic condition for being a good mother.”37

In a study carried out by Rotenberg & de Vargas,38 breastfeeding experiences by mothers were perceived as unique for each child and as a process comprising two critical points: the beginning and the end, that is, the establishment of breastfeeding and the total weaning. Both times require support and information structures, and are crucial to the health of women and children. Thus, health services and professionals, from the attention to prenatal, delivery, postpartum and child care, play an important role in informing and supporting women.27, 37

Corroborating the literature, the report of Case 1 shows the mother’s difficulty in establishing a gradual weaning and concomitant introduction of complementary feeding. Despite the mother’s care and concern, this behavior was harming the child’s weight gain and nutritional status and the mother’s routine.

The mother-child and food relationship goes beyond nutrition and is inserted in an affective dimension of stimulus and search or not of autonomy and socialization. But, eager to feed the child, some mothers have difficulties in handling the food, as reported in the two cases...
presented, and they need to be supported.27 In both cases, the mothers believed that the food practice offered to the children was the best option for growth and development, not realizing that the form of introduction of complementary foods was reflecting on nutritional issues such as low weight and constipation.

Some studies have shown that the mothers’ decision about the type of food being offered to the infant is strongly influenced by their partner, family or friends.38-40 In the cases presented, the family’s eating habits, marked by a non-varied diet and lack of custom to have meals together, have influenced the children’s diet. For Bourdieu,41 the *habitus* refers to behaviors referenced by a socially established membership system, providing an identity to an individual or a social group. This depends on a historical process to manifest itself in the present or change in the future. Such concept allows the understanding of the issues brought in the reports when considering the question of the families’ beliefs and practices in caring for infants.41

Setton42 argues that the modern socialization process can be considered a plural space of multiple social relations, a field structured by the dynamic relationships between institutions and social agents distinctly positioned due to their visibility and resources available. He points out that the interdependence relationship between instances and socialization agents is a way of affirming that the relations established between them can be of allies or opponents. They can be relationships of continuity or rupture. Therefore they can determine a varied and heterogeneous range of unique socialization experiences.” In this scenario, we have the institutions, families, day care centers, and health units as elements of the socialization process of the individuals inserted in the communities to which they belong. The way as this relationship unfolds influences eating habits and other components of the socialization process.42

In these case reports, low weight and constipation were addressed according to family dynamics and considering the values and habits built on food, aiming to repurpose and the available resources of the families and the territory. With this it was possible to see an improved clinical and nutritional status and the organization of families’ routine, as well as the sense of dignity and living and working conditions. The introduction of complementary feeding acted accordingly as a trigger for other family processes, of their view of themselves and their surroundings.

In this sense, to understand and operate the tangle of relationships that are present in the health-disease process, it is necessary that the tradition of Public Health be open to a dialogue with other fields of knowledge, whose instruments can assist in addressing issues related to historical and cultural contexts, and social and subjective conditions of collective individuals. Such knowledge contributes to the understanding of cultural values and representations, opinions and beliefs about health and disease, understanding of family dynamics, the social environment and the way how individuals are part of the world, the understanding of the ways of dealing with
health and supporting the construction of other forms, other than those already established in the reconstruction of biographies, so that the individuals can seek new bases to think, feel and act.43

Therefore, health professionals should have sensitivity and good listening skills to understand the family aspects and realize the best form of intervention to get good results.38 Although based on scientific knowledge, dietary advice alone is not enough to change eating habits and behaviors. It is also necessary that the professionals establish a bond of trust with the family and especially the mother, who is culturally defined as the main responsible one for the selection and preparation of food.31 The need is perceived for the professional to know the context in which the patient is inserted into and leave a prescriptive position that does not empower the individual and makes them responsible for their own care, providing knowledge and at the same time autonomy of the choices of the patients.

The clinical case reports presented about children under two years show the importance of the nutritionist’s role and of other NASF professionals to support the Family Health Team to know the family’s eating habits and advise on the child’s complementary feeding, inserted in the family, sociocultural and environmental contexts. Several authors claim that including a nutritionist in the Primary Health Care multidisciplinary teams is essential and qualifies the team’s actions from assessing the food security and nutrition situation of the territory to the individualized care of complex cases, proposing the dietary guidelines to families and the community and promoting the population’s health.11

Nascimento & Oliveira43 point out that, in addition to the nutrition area technical knowledge, the NASF working model requires a broad knowledge by professionals on public health policies, the territory, the population’s epidemiological profile and the care network. The same authors also point out the need for the professional to have skills to address the individual, welcoming, listening, communicating and working in teams.25 Accordingly, the primary care health professionals should seek to establish closer approach and bond with users, respecting their values, culture and socioeconomic conditions to find the best form of intervention.

The theoretical approach and tools offered by the humanities can add up enough to working with families assisted by health professionals. Among the possibilities, some were experienced in those reports coming from the systemic study of the family, such as life history, genogram and the Single Therapeutic Project, considering the family and social support network and equipment of the territory, more specifically the day care centers. A close look at the cases can predict some risks to children’s health and realize the family and social issues involved for an applicable approach to their realities. Such experiences can contribute to broadening the look of the primary health care professional in decision-making on the management of complementary feeding, considering the sociocultural reality of the families assisted.
Conclusion

The case reports have shown the influence of family behavior on the introduction of complementary feeding to children and its consequences on child development, such as low weight and constipation. In these cases, situations of extreme family difficulties were observed with the introduction of complementary feeding, either by exclusive breastfeeding for a long time, delaying the introduction of other foods, either by early weaning with the substitution of breast milk by excessive cow’s milk. Thus, managing infant feeding is strongly influenced by family, sociocultural and environmental contexts, and it is necessary to have a broader view and consider these factors in nutritional approach of infants’ mothers and family members.

The multidisciplinary and integrated support with the Family Health Teams, as well as the professional view beyond the biological and prescription needs, based also on cultural aspects, contribute to the professional approaching the actual family needs while minimizing risks of decontextualized interventions. The framework of the humanities significantly contributes to the identification of those aspects. In this regard, their adoption is suggested in the routine of professional practices in primary care, especially in providing support for complex cases.

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