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Conceptions of healthy eating among ecological farmers in Paraná, Southern Brazil

ABSTRACT

OBJECTIVE: To describe ecological farmers' conceptions of healthy eating.

METHODS: Study with a qualitative approach. In January and February 2007, supported by a guide, in-depth interviews were conducted with 11 women and one man who were living in an agricultural community in Rio Branco do Sul, Southern Brazil. The interviewees were selected randomly from among the 20 ecological farming families in this municipality.

RESULTS: Three analysis categories were identified: "awareness of healthy eating"; "purchasing power" and "healthy land". The significance of healthy eating for the female farmers involved the idea that foods should be natural, without agricultural pesticides or manufactured chemical products. The daily routine should include abundant consumption of fruits, greens and other vegetables, in addition to the basic rice, beans and meat, and the composition of dishes should aim towards prevention of obesity and chronic-degenerative diseases. Care regarding natural resources in order to ensure production of healthy foods, food safety, environmental sustainability and the future of life on the planet form part of the concept of healthy eating.

CONCLUSIONS: Knowledge, self-criticism and discernment accompanied the conceptions of healthy eating.

DESCRIPTORS: Women. Organic Agriculture. Feeding. Food and Nutrition Education. Health Knowledge, Attitudes, Practice. Qualitative Research.

INTRODUCTION

Studies on human diet and nutrition have been decisive for guiding public programs and policies for health promotion. The disease burden relating to non-transmittable ailments has stimulated such studies, given that inappropriate food intake practices have been correlated with increased incidence and prevalence of cardiovascular diseases, type 2 diabetes and certain types of cancer.[20]

The World Health Organization, the United Nations Food and Agriculture Organization and the Pan-American Health Organization have developed strategies for promoting healthy eating. In Brazil and other countries, concepts regarding healthy eating have been outlined in order to take into account the social and cultural significance of food and the nutritional needs of different population groups. In this manner, support can be given to actions promoting socioenvironmental changes towards healthier dietary choices, both individually and collectively.[a]

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Within this context, on the one hand, information on diet and nutrition should be available so that the population can understand their relationship to health. On the other hand, institutions need to know about the population's dietary practices in order to promote actions that take into consideration the social, cultural and economic factors involved.

Hence, this paper had the aim of describing ecological farmers' conceptions of healthy eating.

METHODS

This study was conducted in an agricultural community located in the municipality of Rio Branco do Sul, which is within the metropolitan region of Curitiba, Southern Brazil.

The community was approached by students in the Environment and Development doctoral program of the Federal University of Paraná, in 2005. On that occasion, an exploratory study was conducted, which identified 20 ecological farming families.[b,c]

This community was composed of Italian immigrants and caboclos (individuals of mixed European and Amerindian ancestry) who had been practicing ecological agriculture since 1990, in an economically stagnant area with low social development which had been undergoing a gradual decrease in population since 1970.[d]

The agricultural production of the families studied was determined by the demand from the associations to which they were affiliated. These institutions provided technical assistance, defined the products that should be planted to meet the market demand and purchased the production. Some of the families maintained kitchen gardens to increase the variety of products for their own consumption.

The women of these farming families had an active and participative role on the agricultural activities. In addition to the domestic tasks that they performed, they helped in the whole process of production, harvesting and transportation of the products that they put on the market.

The women's ages ranged from 22 and 68 years and their schooling level was generally low. Two of the women only did domestic activities and two of them not only did housework and helped in the fields like the others, but were also elementary-level teachers in municipal schools.

In January and February 2007, in-depth interviews were conducted with the aid of a guiding script that included the following questions: "What do you understand from the words 'healthy eating'?"; "Do you consider that your family has a healthy diet? Why?"; "Has it been possible for you to have a healthy diet? Why?"; "Do you believe that it is possible to have a healthy diet?" and "What does the land have to be like for it to produce a healthier diet?".

The participants were selected by means of a draw among the 20 ecological farming families, which was done for each new interview, while excluding those who had already been interviewed.

The interviews were scheduled in advance according to the interviewees' availability and were conducted individually by the main author of this paper. All the interviews were held at the interviewees' homes and lasted for two to three hours. The women were chosen for the interviews because in the families studied, they were the ones in charge of cooking.

A field diary was used to note down gestures, expressions and reactions. All the interviews were recorded, with prior permission from the participants, and these were transcribed by the main author. Transcription of the recorded testimonies was started on the same day as the interview, in a literal manner. Only after concluding the transcription was a new participant contacted, in person, to schedule the next interview. In the end, 11 women and one man were interviewed. This man made himself available for the interview after his mother passed away: she had taken part in the environmental survey mentioned earlier.[e] The number of interviews achieved was considered adequate for an overall assessment of the phenomenon studied through this survey, considering the saturation criteria.[13]

The theoretical reference point taken consisted of social representation. According to Moscovici, social representation comprises a system of values, ideas and practices with two functions: firstly, to establish order that will make it possible for people to get their bearings in their material and social world and control it; and secondly, to make communication possible among the members of a community, by providing them with a code for naming and classifying the various aspects of their world and their individual and social history, without ambiguity.[14]

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[b] The term "ecological agriculture" used in this article involves different currents, along with the farmers with agricultural practices within one of these lines who are at different stages of conversion but can be considered to be alternatives to the agroindustrial production pattern.
[c] Ell E, Crispim JQ, Ruszczyk JC, Floriani N, Zonin WJ, et al. A agricultura de base ecológica na região metropolitana de Curitiba e o desenvolvimento socioambiental. In: 3. Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Ambiente e Sociedade; 2006 maio 23-26; Brasília (DF). v.1, p.1.
[d] Instituto Paranaense de Desenvolvimento Econômico e Social. Caderno estatístico Município de Rio Branco do Sul. Curitiba: IPARDES; 2005.
[e] Serra GMA. Saúde e nutrição na adolescência: o discurso sobre dietas na revista Capricho [master's dissertation]. Rio de Janeiro: Fundação Oswaldo Cruz, Escola Nacional de Saúde Pública; 2001.

The data were then consolidated by means of the collective subject discourse technique (Lefèvre & Lefèvre)[10] to construct analysis categories.

All the research procedures followed the ethical principles contained in the Guidelines and Regulatory Norms for Research Involving Human Beings, of the National Health Council (Resolution No. 196/96).

RESULTS

Three categories were identified in the farmers' narratives: "awareness of healthy eating"; "purchasing power" and "healthy land".

Awareness of healthy eating

For the interviewees, healthy eating consisted of eating natural foods (i.e. without "poison" or chemicals), fruits and greens in abundance and rice and beans with little salt, and avoiding fats, fried foods and dough-based foods.

Concern regarding poison in foods was greatly present in the narratives, such that food produced with any chemical product was taken to be a product presenting a risk to health.

The intervieweers' comprehension about poison involves two dimensions: the poison that the plant receives and which remains in the food when it is produced in the conventional manner; and the poison that is introduced into the food during industrial processing, which could be preservatives or chemical seasoning: "I think that the fewer artificial things there are, the better: no poison and no preservatives." (W. 12)

According to the interviewees, food generally attracts consumers through its appearance. However, these consumers are unaware that it could contain many substances that are unsuitable for health: "avoid the poison… because this is bad for you… well… many people eat things and don't know what they're eating: they think it's so beautiful in appearance, and so they are harmed and don't know this." (M. 4)

The danger that was attributed to the poison was related to the experiences of members of the interviewees' families. When they were still practicing conventional agriculture and were using agricultural pesticides, many of them presented health problems. Within the sphere of affectivity and care, the female eye turns to the wellbeing of her family and children. "Here, it's only without poison... my husband... because that problem occurred... also his pancreas... it gave him a cancer problem... because of dealing with these poisonous things... now, he's in health... which we didn't think possible... because he doesn't use anything... he doesn't put that pump on his back... my son too... also had an intestinal problem because of the poison." (W. 9)

According to the interviewees, poison is also present in manufactured foods, because of the chemical products added during the processing. However, it was observed that the dose of the dangerous product contained in the food was not a matter that they took into account as a risk to health. The risk was correlated with the presence of the dangerous product: "not much of this product... these things are in a can. I think that's it... because there's a lot of preservative (...) I think that if we avoid these products, it's healthier." (W. 15)

Two interviewees reinforced the idea that food should be light and frugal to be healthier: "Ah... I think that it's eating a lot of greens and fruits... drinking natural juice... and eating basic food... rice, beans... meat, you know, but not the same thing every day" (W. 3). "People who eat more fruit don't complain much about things, you know. It hurt here, it hurts there, headache, stomach ache, and when people eat badly... I've even seen this with my husband... when he eats foods with a lot of fat, he doesn't feel good... when he eats better... with greens, beans, rice, these simple things, he rarely complains... this way we live longer." (W. 5)

Availability of varied foods, observation of dish composition and food combinations and concern regarding obesity and chronic-degenerative diseases are issues that strengthened the interviewees' conceptions regarding healthy eating: "It's not the quantity of food... but the variety... thus... fruits, greens... really... Look at the starch... not putting on two or three types... Try to control this... to give some variety... if only because of obesity, which I think is an extremely serious problem that is increasing... Avoid fats too, because of the cholesterol." (W. 6)

Because these families had adopted ecological agriculture, they felt safer and more at ease about consuming what they produced. The interviewees also showed that they were attentive regarding the quality of foods that they bought, and were more critical about what was healthy: "We consume more greens than we used to. We feel from the foods that organic food is healthier... we don't feel the smell and taste of agricultural pesticides" (W. 19). "Ah... we used to plant conventional crops and ate them. We didn't care about what we bought in the market and didn't even know what conventional food was... Now we know that it just harms you... Now when we go to buy things in the market, wow... passing close by the greens, you can feel the smell." (W. 10)

Purchasing power

Purchasing power involves the need to buy what is not produced, lack of money to buy what is healthy and knowing what to buy.

According to the interviewees, bought food had a negative influence on their families' diets. What they produced did not meet all their needs, and the foods that they acquired from the market contained agricultural pesticides and chemical substances: "We try... to eat more of our own things. We only buy things that we don't have... that we are unable to produce... we have to... but if we could produce everything... we would do so... because we know... that the things that we don't produce, everything... has chemicals... poison." (W. 13)

According to the interviewees, it was not always possible to plant for their own consumption and, at the same time, to sell and thus obtain financial resources for purchasing what was missing: "We would like to have more income... better money... so that we could have... a lot of fruit... which we almost never buy because sometimes it is very expensive... we don't buy it because it's not organic and organic is more expensive" (W. 5). "We don't always have money to buy things... we eat basic foods... beans, rice, a lot of eggs, meat when we have it... greens." (W. 3)

It was not always possible to resist the desire to buy foods that the interviewees themselves did not consider to be healthy, such as desserts, hamburgers, ready-to-use seasonings, soft drinks and other items: "If people stay alert, it'll work, it will… it's just that for those who buy everything, it's more difficult, you know… to know what you're buying… these ready-to-use products. Today, you have to know how to buy things so you don't get harmed… If we don't buy things, we don't eat." (W. 9)

Healthy land

Healthy land brings together issues that show the contribution made by ecological agriculture towards promoting self-esteem and raising awareness about the need to care for natural resources, with the aim of sustaining the environment and life on the planet beyond one's time.

In the interviewees' view, preservation of nature is fundamental for healthy eating. This involves continual care for the land, so that healthy plants can be produced. "The soil has to conform with nature… without anything chemical… because everything goes to the plants…both the good and the bad… So if the soil is clean, the plants are going to be healthy… that's it!" (W. 1). "Take care of nature... because we're seeing that it's getting difficult to produce. For us here, it's getting difficult to produce lettuce... because of the heat... more and more difficult... to have a healthy diet, because there will also be things missing... if people took more care of the forests and nature, it would still be possible... if everyone does their bit... People think of themselves today, ah... there's water for me today, until the day I go... to hell with the rest. (...) We want to have a good life... but we want this for the others, too." (W. 5)

Ecological agriculture was perceived as conferring a privileged status on the condition of being a farmer, living in a rural environment and enjoying nature. "For people who don't live like us, it's more difficult to escape from agricultural pesticides and preservatives… everything has this stuff today… these chemical products, you know… so you can say that we're privileged" (M. 4). "I think that if what we eat isn't healthy... then what else is, you know... because we don't eat canned food; we don't eat... all these bought things; we don't eat much meat" (W. 11). "The life that we have – I think few people have this... it's all natural, you see, we have good water... food, all natural." (W. 11)

DISCUSSION

According to the interviewees, healthy eating involves the idea that foods should be natural, without agricultural pesticides and manufactured chemical products. Abundant consumption of fruits, greens and other vegetables, along with rice, beans and meat, should be envisaged within the daily routine. Care taken regarding natural resources, food safety, environmental sustainability and the future life of the planet also form part of the conceptions of health eating that were presented by the interviewees.

Beck[2] highlighted that industrialization and modernization has led to the emergence of a "society at risk", in which the consequences of these processes, which previously had been abstracted, have now started to be demonstrated and questioned. "Reflective modernization" has gradually emerged, along with self-critical society that is concerned about threats to the future. According to Giddens,[5] with the reflectiveness of modern social life, social practices have started to be examined continually and are reformed in the light of successive discoveries and information on these particular practices.

Attention to risks is acquired by individuals from their experiences, beliefs and practices, which lead them to establish their own meanings for the phenomena and for what they recognize as risk. In this respect, lay people take on a fundamental role in deconstructing and reconstructing paradigms and models that are not based only on social fears or technical-scientific threats.[7]

Many risks, such as chemical contaminations, harmful substances in foods and ailments of civilization still completely escape immediate human perception. The dangers are often neither visible not perceptible to those who are affected and, in certain cases, will

not become active during the affected individuals' lifetimes but will have consequences for their descendants. These require attention and effort from scientific institutions so that theories, experiments and measuring instruments can be developed to make them visible and interpretable as dangers.[19]

The ecological farmers' conceptions of healthy eating put the interviewees into a context differing from that of the nutritional transition. The latter is characterized by replacement of traditional foods with highly processed foods that have high energy density and are poor in nutrients.[18]

Lifschitz[11] discussed the notion of nature and the diverse conceptions and types of social discourse surrounding natural food. He presented four viewpoints corresponding to three groups that make pronouncements on such topics: small campaign groups advocating natural concepts; healthcare professionals; and the food industry and media. According to the campaign groups advocating natural, macrobiotic and vegetarian concepts, foods are recognized as natural through their own nature, born out of the land and originating from manual mixing and hands-on contact with the raw materials. Thus, they consider that natural-industrial products are shams, coming from a second nature. According to healthcare professionals, natural concepts are part of the discourse on "good diets", characterized by adequate balance between the physicochemical properties of foods and the norms relating to physiological and anatomical standards. According to the industry, natural products correspond to a formula "without chemical additives", which is an ambiguous concept given that mass production of "natural" products may involve chemical processes. The media, as an ally of the industry, provides propaganda about the virtual consistency of natural concepts, thereby seeking to annul opposition between industrial production and hand-crafted production, or between chemical inputs and the natural land.

The discourse among the ecological farmers of the present study presented convergence with the discourse of both the campaign groups and the healthcare professionals that Lifschitz[11] identified. This was shown through the farmers' attention to healthcare knowledge. Their discourse diverged from the conceptions of the media.

In intervening in the production, preservation, distribution and transformation of foodstuffs, manufacturing occupies a place between foods and nature. In the imaginary regarding manufactured foods, there is the idea of impurity and artifice. The industry makes food into a mysterious artifact: an unidentified and lifeless edible substance that might be dangerous to health.[19]

It was seen that there was a dilemma in the ecological farmers' experiences, because while they were producing foods without any type of "poison", they were unable to feed themselves exclusively on "poison"-free products due to their low purchasing power.

According to the interviewees, agricultural pesticides were seductive, since their use would increase the production and offer of food, as well as increasing the likelihood of a successful harvest. These substances would also give the products a healthy appearance. Furthermore, manufactured foods would attract consumers through their practicality, flavor, appearance and aroma. These foods are deceptive and harmful in the eyes of the farmers.

From the point of view of toxicology, the term "poison" is used to designate a chemical substance that, when introduced into the organism, even in relatively small doses, produces severe alterations and even death. The most important point to consider in defining a substance as poisonous is to report the quantity or dosage above which the product becomes dangerous.[15,16] For the farmers, poisonous substances open up a conflict between economic-financial survival, the risk to health and the sustainability of life on this planet, as put forward by Hubert.[9] According to this author, the agricultural food industry brings in new representations of what food is, and also anxiety relating to insidious poisoning. The fear within present-day society regarding absorption of poisons through foods is real and has given rise to conflicts and doubts in choosing foods.

According Tierney-Ohnuki,[22] concern about consuming foods that contain harmful chemical substances is a current phenomenon within society.

The interviewees' attention to the question of poison reveals that in their view, foods produced using agricultural pesticides are inedible. For them, food that is served up is edible when it is nontoxic, provides individual and collective pleasure, does not generate fear or insecurity and does not confer risks to health.

Hernàndez & Arnaiz[8] discussed representations of what is edible and inedible in present-day society, and highlighted that these concepts operate starting from comprehension of food culture, in which foods that are nutritive and nontoxic are considered to be edible. These authors posed questions about why certain substances that are within reach are not eaten and why everything that is biologically edible is not consumed.

Intake of foods with agricultural pesticide residues, and their risk to health, is still the subject of studies and research, and there is no certainty regarding the limits for pesticide use and consumption. The problems identified are still more commonly related to agricultural accidents involving farm workers.[1,21,24]

According to Giddens,[6] within the context or overall risk, in which overall development and individual actions become closely linked, oneself and one's body are placed at a level of importance similar to that of the downplayed "nature". This author stated that having a sense of self meant having self-awareness and a notion of individualized identity, i.e. detached, singularized and stabilized from the collective identity, and defined reflectively. The farmers' reflective thinking about poison showed that they sought to take up an ethical stance in relation to nature, their health and the produce from their work, starting from the self-awareness acquired through practical experience.

According to Pierret (apud Xavier),[23] health and the body are the fundamental individual and collective capital, and there is a need to fight against their destruction. At the end of the 20th century, discourse about health replaced discourse about disease, and this was presented as an innovative phenomenon that encompassed all of society.[23]

Individuals need to be prepared to make informed choices, because when no environmental risk management is undertaken, the experts shift this to the private sphere, under individuals' responsibility at the time of making behavioral choices. Educational proposals within the field of nutritional guidance are made in the same manner, with emphasis on the need for changes at individual level in order to promote healthy dietary choices.[3]

In Brazil, the National Dietary and Nutritional Policy and the General Strategy for Promotion of Healthy Eating share the purpose of promoting responsibility within society, the productive sector and the public sector for making the necessary changes within the socioenvironmental sphere to favor healthy dietary choices.[17]

The conception that the diet should be light is greatly valued in present-day society, particularly in urban areas and among the female population.[4] This relates to the type of energy expenditure among urban populations, which, according to Serra,[e] are based on tertiary-level labor activities that have greater requirement for intellectual dedication and require less energy expenditure than manual activities do. The discourse on light diets has been widely taken up by the mass communication media, and this also permeated the conceptions of the farmers participating in the present survey.

The meanings that the interviewees attributed to healthy eating included recommendations recognized through scientific discourse disseminated by the media and by healthcare professionals.[a] The need to take into consideration and maintain the "quality of nature" is also emphasized, especially with regard to water and the soil, in order to produce healthy crops sustainably. The interviewees made it clear that there were personal limitations, including economic factors, which prevented them from putting into effect the diet that they considered ideal. These limitations were related to their tastes and wishes, among other factors, such that during the interviews, these were expressed with a sense of guilt and shame.

Lipovetsky[12] highlighted that present-day society is a civilization of desire that cultivates immediate pleasure. Within the sphere of consumption in this society, the ambition is to detach mankind from his past of neediness, inhibition and asceticism. The ambivalence of pleasure-aversion contained in food not only may be a source of sensuality, plenitude and intense sensory pleasure but also may provoke feelings going from simple discomfort to repulsive aversion capable of causing diseases.[12] At the same time that food is a source of energy, vitality and health, it may also be a vector for intoxication or poisoning.[19]

The individuals interviewed had been living in their rural area for many years, but because this area is incorporated into the metropolitan region of Curitiba, they shared all the elements and dilemmas of the urban context when the subject was food acquisition, i.e. availability of a variety of foods, convenience, comfort and observation of costs, preferences and needs.

In conclusion, the data of the present study reveal that there is a need to establish support mechanisms for ecological farmers, for production planning, along with incentives to ensure that they can consume their own production, and not just attend to the preoccupations of commercial marketing entities.

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