

A Socio-Cultural Diagnosis of Adolescent Diets in Comitán, Chiapas

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Abstract

This study, based on group interviews with adolescents (pre-university level students) from various educational institutions and socio-cultural backgrounds in Comitán, Chiapas (Mexico), was undertaken to identify the settings for the dietary practices of young people. Using a multi-dimensional analysis, we found that the predominant paradigm in public health, based on concepts such as risk factors and lifestyle, tends to obscure the complexity of social processes and to place responsibility for health on each individual. The dietary practices of adolescents are determined by the dynamics established in school and family environments and occur in a context of time pressures as well as the poor provision and choice of foods. We noted a discrepancy between knowledge on the one hand and dietary practices, weight control, and perceived risks or expectations concerning body image on the other.

Introduction

Under the influence of interacting economic, social, and cultural transformations, Mexico in recent years has undergone a period of dynamic change. Although this change has meant access to better opportunities and services for the majority of

the population, it has also given rise to important problems and to certain undesirable consequences derived from 'developmentalism'. Specifically, Mexico has seen the gradual consolidation of the hegemony of a global culture, whose influence on broad sectors of the population has led to change in socio-cultural practices and customs, including dietary habits.

We should begin by considering an international context which increasingly determines contemporary dietary practices. This context is the product of a long historical process through which economic, technological, and urban development have interacted and gradually established a hegemonic pattern of food consumption. All modern or modernizing societies have tended to adopt this pattern regardless of the specific contributions made by local cultures. Whether we look at children, adolescents, or adults, daily dietary patterns inevitably and increasingly obey this pattern, albeit to different degrees. (Expeitx Bernat, E: 2005)

To develop a multi-dimensional perspective on this process we need to look at the various contexts in which adolescents develop. But rather than simply describing in ever greater detail how adolescents eat, an understanding the complexity of context should permit the association of nutrition with health risks. This allows us to address certain fundamental ques-tions concerning these changes: What are the benefits and consequences to various populations of this new socio-cultural and economic openness? How do adolescents integrate these socio-cultural synergies into their daily life?

Given the complexity of a multi-dimensional perspective, it is necessary to understand the specifics of each context as well as the viewpoint of

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our subjects. How to they approach and solve the challenges of diet and disease prevention? With these questions in mind we undertook to identify the different contexts and socio-cultural dynamics in which diverse groups of adolescents in Comitán, Chiapas, Mexico are nourished.

A Theoretical Approach to Nutrition Incorporating Health and Cultural Context

Over and above the aspects of change and continuity which characterize the process of modernization past and present, dietary practices are also symbolic and/or behavioral expressions. They are sustained or promoted by value and belief systems, which according to Foucault (1978) are the product of socio-historical evolution, giving rise to various types of subjectivities and knowledge. These value and belief systems define which foods are desirable and which undesirable or what is healthy to eat and what is not. These values are social products imposed on each individual and implanted in them in the interest of reproducing a given social order. This is particularly true in industrialized societies. However, these values must respond to multiple and diverse demands. The supply of food stuffs must find an effective demand among consumers. Yet modern dietary practices seem at the root of the growing public health problems and stand in contradiction to the dominant discourse on body image. It is not surprising that cultural images and evaluations of different foods are decidedly conflicted.

Commercial foods are a symbol of modernity (Doval H, 2006) and, paradoxical as it may seem, at least in certain contexts, status.¹ An array of commercial strategies promotes the consumption of many food products using the stereotypical images of glamorous lifestyles. In poorer countries we see obesity associated, not with illness, but rather with health. It can be a symbol of affluence in some cultures and promoted as a mark of beauty by the media. (Peña, 2001)

Nutrition, the body, and health are intimately linked and are developed in ways which incorporate

¹ This is more common in societies in poor countries where dominant models of consumption are seen as a sign of a more modern, civilized life.

both the experience of our physical bodies and our sense of identity. Time and space order our sense of identity in the world, our relationships, our interactions with others, and the way in which we care for our bodies. For example, what we wear is part of a micro-social order in most social spaces. When we dress we have to keep in mind the implicit rules of those spaces; there is a dress code to be obeyed. These spaces are not gender neutral. Women's experiences of public social spaces are different from those of men. While space imposes structures on us, we can, for our part, dress in ways to control our social space. Obesity, however, is a reason for social exclusion. Persons whose weight poses no risk to their health or social life are stigmatized because they do not have an "ideal body." This pressure to conform to an aesthetic ideal has been intensifying. However, not all overweight people are equally stigmatized. Having an ideal body is more important for women than for men. Consequently, obese women suffer more stigmatization and pressure to diet than obese men. It is women who are the clientele of the weight loss clinics. (Alemany, 1993; quoted by Martinez, 2004)

The diet culture of weight and size control has responded partly to a biomedical discourse while not neglecting the existence of real health problems. But the food industry has responded to this threat – real or imagined – by developing new marketing strategies which highlight the production of 'healthy' products and specifically of 'light' foods.

In addition to the biomedical discourse we must also consider the complementary discourse of body aesthetics. These establish a strategic alliance between health and beauty. But we should understand that just because someone is informed that consuming certain foods can be harmful, this does not mean they will choose not to consume them.

Martinez Barreiro points out that the tension between diets and both dietary excesses and deficiencies has increased in modern consumer societies. The body has been redefined as an object of work incorporating more and more elements such as exercise, diet, makeup, and plastic surgery. The body is subject to continuous revision and transformation; it has become a perennially

unfinished project which needs to be worked on to consolidate personal identity. Caring for it has consequences not only for health, but also for feelings of happiness and personal fulfillment as dictated by contemporary standards of health and beauty. The body thus becomes a 'sign.' It is a 'message' which speaks of its owner and defines happiness as the projection one gives to others (Barreiro, 2004).

In this context charged with contradiction, where 'what should be' and 'what is' are pulled first in one direction or then in another by messages about health, beauty, and good living, the body becomes an object of consumption and a commodity. The pace of modern living and the model of economic development further reduce any control individuals may have over the quality of their food, while at the same time they take up practices which express their ambivalence and anxiety, such as dieting, exercise, makeup, the consumption of fashion, and plastic surgery. These practices can be taken to extremes, such as eating disorders, compulsive consumption, risky surgery, and true identity crises.

Young people provide the ideal marketing target. They are searching for their identity and ideals and this renders them more susceptible to the imitation of models of body image. From this arises the contradiction between the desire to consume globalized foods associated with status and pleasure and the desire to have the ideal body promoted by the media. They are left with a sense of self-esteem that is vulnerable.

Horrocks (1984) considers time pressures to be a crucial factor for young people. Their involvement in cultural, school, and media activities drives them to live under a constant pressure, always tailoring their activities to time constraints. To illustrate the impact of time and space, a study conducted among "moderately active and inactive" students in Monterrey demonstrated that – given the size of its population – there were few places to exercise. Most venues were of poor quality and were not properly equipped. All this made physical activity more difficult. Age was an important determinant of exercise with younger students exercising more. Women were more likely to engage in solitary

exercise, men prefer group sports. The reasons for engaging in physical activity vary by social class and are strongly influenced by the family context. Families involved currently or in the past with sports are more likely to promote exercise and the enjoyment of soccer. (Ceballos, 2005)

Nutrition and Health

From a public health perspective, Mexico – like many other countries – is undergoing a demographic, epidemiologic, and risk factor transition. This is characterized by an increase in the elderly population, a change in patterns of morbidity and mortality from infectious diseases to chronic, degenerative diseases, and adoption of risk factors associated with the lifestyles of developing societies. The risks for chronic and degenerative diseases, which are now among the top causes of death, are also increasingly seen in the younger population. This is particularly true for obesity and a sedentary lifestyle. In Mexico these lifestyle changes are particularly marked in the urbanized rural populations. The change in their life-style is characterized by an increased consumption of fats, sweeteners, and refined carbohydrates, along with decreases in physical activity. This has been called the *nutritional transition* and is characterized by rising incomes, a growing influence of the mass media and food marketing, and a series of characteristic changes in work and leisure time activities. (Isunza A, 2004)

Processed or industrialized foods have become more economical than fresh ones. A negative association between the energy content of foods and their cost has also been noted. This has meant a social reordering of who gets fat as obesity becomes a problem of the poor. (Ortiz, 2006) Macro level access issues create a food crisis which molds consumption patterns. Poor people can no longer afford their old diet. "The prices go up as the salaries go down." (Ortiz, 2006; Aguirre, 2000)

The increase in obesity, considered both as a chronic disease and as a risk factor for many other diseases, is influenced by a complex interaction of genetics, behavior and the physical and social environment. Although research in the past few years has identified genetic factors which explain

the greater susceptibility of some individuals to become obese, the sudden increase in obesity which has occurred in the last few decades and its wide population impact are due principally to major changes in diet, physical activity, and other social factors. (Peña, 2001)

The high prevalence of nutrient specific deficiencies among apparently healthy individuals who are obese or overweight has been called "hidden malnutrition." Obesity and malnutrition co-exist in geographical regions, in social strata, in families (mother obese, children malnourished), and even within the same individual (obesity with chronic growth retardation). Among socially and economically privileged social groups, obesity first appears at a young age and is associated with overfeeding and the consumption of energy and nutrient-rich foods. (Isunza, 2004)

Although adolescents are a diminishing proportion of the total population, these social changes can have particularly severe consequences for them. 35 to 40% of them live in extreme poverty. Only 53% of those under 19 go to school; 44% of the males and 24% of the females are already in the workforce. There is a high risk of suicide, HIV/AIDS and accidents. The Gender-related Development Index (GDI), a measure that takes into account life expectancy, educational attainment, per capita production and other gender-related factors, is one way to measure the inequalities between men and women in their ability to develop to their full potential. The GDI for adolescents is 0.775, indicating a disparity in the possibilities for Mexican girls with respect to boys. This needs to be kept in mind when considering the development of Mexican adolescent boys and girls. (Santos, 2003)

In Mexico, the prevalence of overweight and obesity in women aged 12 to 19 in 2006 showed a modest increase in overweight from 21.6 to 23.3 (7.8%) compared with 1999, and a small absolute increase, but high in relative terms, in obesity: from 6.9 to 9.2 (33.3%). (National Health and Nutrition Survey, 2006) Increases in BMI (Body Mass Index), abdominal circumference, low physical activity, and younger age are associated with higher insulin levels. This indicates that those Mexican adolescents who are overweight, have an abdominal

distribution of fat, and are inactive have significant hyperinsulinemia, a risk factor for diabetes. (Ramírez, 2003)

The known risk factors for atherosclerosis include family history, male sex, hypercholesterolemia, smoking, hypertension, stress, aggressive or competitive personality, diabetes, a diet rich in saturated fats, obesity, and a sedentary lifestyle. Other factors such as understanding the risk of chronic diseases like diabetes are associated with a high educational level, urban residence, and high socio-economic level (Angeles A, 2005).

Extreme dietary practices can be seen as a response to specific social conditions. In Spain 12-16 year olds who score a score of 20 or more on the EAT (Encuesta de Actitudes de la Alimentación, Nutritional Attitudes Survey) show significant differences in their disciplinary practices, the number of friends diagnosed with eating disorders, and their personal diet. Those with the highest EAT-26 scores have the highest body mass index and the lowest social rank. The profile of someone with an EAT score over 20 is that of a middle class girl, unhappy with her body, who does exercise to improve her appearance, eats a hypo-caloric diet, lives in a very strict family and fights with her father. (Gil E, 2007)

Research adopting a more psycho-dynamic viewpoint has focused on explaining dietary problems in function of parents' upbringing and childhood experiences. These are important determinants of the values and ways in which parents educate their children. The situation becomes even more complex when experiences and styles of interaction of both parents are combined to achieve mutual agreement on the expectations, values, and goals they want for their children. (Atkin L, 1998)

Regional and local frame of reference

During the last two decades, the state of Chiapas, Mexico has been the setting for various historic events which have either set loose or fomented dramatic social processes. These multiple changes, given their abrupt, almost vertiginous, nature and their broad scope have sometimes eluded the attention of decision makers and particularly of social scientists. While there has been a period of

transition towards greater economic openness and integration with the center and north of the country, nevertheless the cultural diversity and particular history of Chiapas have lent this process some very unique characteristics.

The sudden appearance of the Zapatista movement had effects that were direct and immediate, as well as indirect and longer term. Among these were significant population shifts. At one point socio-political violence played a crucial role in the displacement of rural populations, mainly indigenous, into urban centers.

The municipality of Comitán has a population of 121,263 inhabitants, of which 58,237 are men and 63,026 are women. 66.83% live in the city and 33.17% in the rural areas (Chiapas Statistical Yearbook, 2006). Comitán is the capital of the municipality. As it has grown over the past 450 years, modern buildings have sprung up alongside the old colonial structures.

The city of Comitán has undergone considerable economic development in the last 40 years. The city has become a bustling commercial center of 80,973 inhabitants. One now sees traffic congestion and people fill both traditional shops as well as the modern shopping malls which are changing the lifestyle and diet of the population. Nonetheless, as a general rule, it is still the housewives who do most of the shopping and cooking.

Comitán offers five levels of education: pre-school, primary, secondary, pre-university and university. At the primary level and above each school has a cafeteria where pre-packaged products such as fried snacks, cookies, soft drinks, juice, sweets, ice cream, and lollipops are offered. Fried food, prepared the same day, is also sold. In the areas surrounding most schools there are shops and street vendors offering similar products during the half-hour recess.

Methodology

We undertook a qualitative study among adolescents using focus groups. Our goal was to learn about the different places where they eat as well as the consequences of their eating habits for their physical and mental health. We also conducted two focus groups with teachers, one from

a public school and the other from a private school. We included schools with students who were lower-middle and upper-middle class as well as rural adolescents who were not in a formal educational program and were working.

We organized 12 groups of 8 to 10 adolescents. In each educational setting we organized one group for boys and another for girls. Inclusion criteria were: age between 15 and 18, voluntary participation, and enrollment in the educational program. In addition, we also included two rural groups.

Pertinent characteristics of the study sites:

1. Comitán Preparatory School (*Pre-paratoria de Comitán*): 810 students, co-ed, generally students from Comitán.
2. Mariano N. Ruiz High School (*Colegio Mariano N. Ruiz*): 145 students, co-ed, Cath-olic.
3. Technology High School Center (*Centro de Bachillerato Tecnológico CBTIS*): 1613 students in two shifts (morning, evening), co-ed, preparation for technical careers.
4. Chiapas High School (*Colegio de Bachilleres de Chiapas, COBACH*): 526 students, technical degree with the option of more advanced studies.
5. National Education High School (*Colegio Nacional de Educación, CONALEP*): Professional preparation for technical careers. Morning and Evening shifts.
6. Rural Area: For ease of access we picked the town of Villahermosa, Yalumá, approximately 10 kilometers from Comitán.



Map of Chiapas



Political Map of Chiapas

In rural areas groups of males and females were drawn from adolescents involved in school, agriculture, and domestic work.

As a consequence of this sampling strategy the adolescents who took part in this study came from a diversity of socio-cultural backgrounds. Most of the rural males were studying in a distance learning program (*telesecundaria*) and the women were doing domestic work. However, there were a number of rural youth who were obtaining their high school diploma in one of the schools in Comitán (particularly CONALEP).

For purposes of analysis and presentation we divide our findings into three areas: food culture, control over the body, and health and food.

Results

Food Culture

The interviewees were conscious of belonging to a society which, to varying degrees, is in the midst of substantial change. This means, among other things, that for many of these adolescents their dietary practices are shaped by a family food culture that lies on a continuum between traditional and modern. Within this continuum, however, economic differences – such as those between rural and urban areas – play an important role. As the following quotation suggests, there is more meat available in

urban areas as well as more resources with which to buy it.

For those of us outside of towns, our main meal every day is just beans. We find ways of combining them so that they're not boring. It's different for those who live in the city. Occasionally someone goes to Comitán and brings back meat. They eat meat, but here we hardly ever do. (Rural community/females)

Despite the persistence of various traditional cuisines, the consumption of junk food and commercially prepared foods is on the increase, both in Comitán and in most large cities in the state of Chiapas.

The first institution in which habits are acquired is the family. Subsequently the education received at home is reinforced by society through school, church, and the media, among others. In this study we found that for most of our subjects dietary practices are broadly determined by the rapid pace of modern life which is imposed on adolescents and their families. Our interviews suggest to varying degrees that dietary practices reflect adaptive processes adolescents and their families have developed to meet the demands of modern life. Societal transitions give rise to new family dynamics and new value systems. Time emerges as a key factor. It reduces possibilities for coexistence and communication, while making it difficult to follow a balanced diet. It is important to note that alongside these adjustments there remains an attempt to preserve those aspects of family living centered on specific dietary practices.

At home, in my case, on weekdays because not everyone comes home to eat, they have to go out to work. At weekends we're all there.

Mostly at weekends, on weekdays we eat kind of balanced, we eat more vegetables, vegetable stock. We hardly eat any meat during the week. On Fridays we buy fish, mojarra, and so on.

Generally on Sundays I do eat more, because my dad ... But on Sundays, yes, but since he

works all day on Sundays, he has breakfast and comes home to eat at 2:30 or 3 o'clock.

Yes, I eat more, on Sundays I eat all day.
(Preparatoria del Estado, females)

Some days my dad doesn't come home, sometimes he works all week. He's the school headmaster. Or sometimes my mother comes in the morning, she's starving when she arrives, so they eat, and my little brother and I arrive at practically the same time. At weekends we all eat together.

There is a noticeable and recurrent contrast established by our subjects between what they eat – or want to eat – at home, and what, inevitably, they eat outside the home.

Yesterday, for instance, I had coffee and tortillas with beans for breakfast. In the afternoon when I got home the whole family had chicken stock with tortillas and lemon water, and at night I had tortillas with beans and coffee for supper. At school I had a Coca Cola and some bar cookies, plus chewing gum.

Sometimes young people are emphatic about safeguarding the quality of food at home.

In my family's case, my dad diets. But still keeping within this diet, he makes diet juice for the whole family every day. (COBACH, male)

My mom prepares the food and tries to give us a balanced diet. There's salad every day and she makes us eat it. (Colegio Mariano N. Ruiz, female).

The prevailing dietary habits in each family determine the quality and healthfulness of food eaten at home which, sometimes, may be less than ideal.

Nobody in my family follows a special diet, but sometimes they are careful about things like fat and all that. But in terms of sugar and putting

too much salt in food, I think we're used to that too because they are the ones who do all that, so we're used to it already. (COBACH, male)

The environment at school

In addition to the family, the dynamics and circumstances of school life are mentioned as a crucial factor affecting not only the times when food is eaten, but also the types of food available.

My mom won't let me leave the house if I haven't had my shake. I don't have breakfast at home, so at school I have a sandwich, tacos, pastries. I know that food contains a lot of carbohydrates and that it isn't good to eat too much of it, but what can I do? There's no choice, we can't leave the school and that's all we're offered. The vendor is a friend and I wouldn't want to ask her not to sell us just fried snacks, it's how she makes her living.

School schedules involve periods that are both inflexible and long. Students contrast this with the short time allotted for recess which is the only time they can buy breakfast, lunch, or snacks. These pressures make it difficult for them to eat healthier food. In the upper grades the school day is divided into two shifts: the morning session runs from 7 AM until 2 or 3 PM, the evening session is from 2 or 3 PM until 9:30 or 10 PM.

Students highlight the problem with recesses, which are not only very short, but occur simultaneous for all students in a school. Consequently, there is hardly enough time for them to buy what they want. They have to ask for things that can be cooked and eaten quickly or taken into the classroom. Food consumption becomes just one more of daily transactions they must negotiate as best they can. The limited supply of “healthier” foods was also mentioned, since the school menu tends to be high in fats, sugars, and carbohydrates.

The structure of the school constrains social interaction to occur outside of the school day and off of the school premises. Both the types of food and the hours when adolescents can eat are conditioned by this. Further, we cannot ignore the growing influence of commercial marketing. Food

manufacturers have learned marketing techniques which reach into all nooks and crannies of daily life and respond to the needs arising within each moment. Home delivery of food is a special example of this form of marketing, although not the only one.

When we work as a group, the men tend to work together, the women make up their own teams. We do it like that because we associate with our buddies, people we trust. It's only if one of us is going out with someone else in the room, then yes, his girl joins the team. When working, we always have junk food or at least popcorn to snack on. It's part of feeling at ease. Like now, for instance, when we're having a coffee, we feel better, more like friends. It's like when you have a beer, you always have something such as peanuts, chips, or other nibbles. (Colegio Mariano N. Ruiz, males)

A bar of... yogurt, oh and some chocolates, that's all. Some chips or something in the house, because sometimes I eat, then I look over my homework or watch TV, have some gum - it's not long before I'm dying for some gum or candy or whatever. (Preparatoria del Estado, females)

Beyond the structural aspects mentioned previously, it is worth pointing out the rhythms of daily life influence food consumption at the level of family, school, and friends. To share food implies being part of a socializing space, one where diet acquires particular meanings.

The spaces created by their daily activity at school and the relative spontaneity of adolescence both favor the consumption of certain food types. In practice, this leads adolescents to see a sharp contrast between the social context of food consumption at school and at home. This contrast often obscures the issue of food quality.

Yes, here in school it's anything goes, but at home it's a different matter. Being with your friends means going wild, and that goes with junk food. However, with the family it's more of

a formal meal. "So, son, how did you get on at school?" they'll say.

Yes, sometimes you feel full and suddenly it's "Come on, please join me". "No, I don't want to eat because I'm full". "Come with me to buy something". "OK", you say, so you buy their hotdog or pastries. I know I'm full but I see he's eating, I fancy something so I order a sincronizada². This time it's just because I fancy one, not because I'm hungry. (Preparatoria del Estado, males)

It's a bit of a habit, you feel like having what the others are eating, recess is too short to go and play football. It's not so much that you're hungry, you just fancy one, if you're full you don't (...). If you're full and you fancy whatever they're eating, chips, depending on the type of snack, maybe something sweet is tempting. But if it's chips or cookies, no, because you're already full. If anything, cookies or candy. Some-times, if I'm hungry... chips and stuff, a bag of chips in my backpack and I nibble at them like a rat! [laughter] (CBTIS afternoon, males)

One finding of particular importance is that adolescents see the consumption of candy, such as boiled candy or chewing gum, or commercial fried snacks as a way of overcoming boredom in class.

I chew a lot of gum, especially during very boring lessons. Corn chips can be a way of killing time. (CBTIS, females)

Adolescent Diet and Health

Adolescents recognized that their dietary habits were unhealthy. Most had to be in school at 7AM and so did not eat breakfast. Those in the evening shifts start at 2PM and are not home until after 9 or 10PM. They neither have a meal with their family nor eat meals that are balanced and varied.

² Grilled sandwich of cheese and other ingredients (often ham) between two tortillas

There's little time for breakfast in the mornings - I have breakfast on my own, for instance. I don't come home for lunch because of school, so I don't see my parents until night-time. At night my supper is what there was for lunch, I don't have what I'd prefer for supper. They leave the food ready for me, I arrive and eat, it makes a big difference. (CBTIS afternoon, males)

Sometimes when I go hungry for a while I get very... and I've been told... a burning sensation and it's gastritis. Yes, we just put up with it. Sometimes we have breakfast at 8.45, sometimes we don't have time for breakfast. Because we all get out at the same time, so they can't serve us, and we only have half an hour. Before, each group would go out every hour.

I don't have supper, I don't feel hungry. I think most people don't have supper. One isn't hungry at night; since we sometimes get home and have our main meal late, at about 4 or 4.30 sometimes - we leave here at 2 - sometimes we have homework to do, so we're not going to eat. (CONALEP morning, females)

Despite the powerful effect that school dynamics have on adolescent dietary practices, there are more subtle aspects related to gender. For example, some subjects reported that females are more likely to come to school with a healthy lunch prepared at home. Among males the prevailing view seemed to be that if they did this, it would cause embarrassment among their peers. It is interesting that males themselves view this attitude as a change occurring within them from adolescence on. This suggests that it is a component of those behavioral changes that consolidate masculine identity in which a sense of independence is important.

Yes, because as the others say, they send my lunch, so it's not so much what I decide to eat as what my mother sends. But when you're in high school, it's more a question of what you want to do, so if I feel like eating something, I will. (Pre-university, males)

Healthy eating is not part of the curricula either the State or National levels nor in the high school program. Adolescent health promotion in the schools involves addiction prevention and sex education.

While adolescents link their diets to the ways in which schools are organized, some teachers feel that in their role as educators and as members of institutions with a very specific mandate, they should not get involved in students' diet beyond providing students with information. From their perspective, it is a question of habits that come from the home environment. They see no direct relationship between the dietary habits of their students and the educational objectives of their institution. Nor are there professional incentives which might encourage them to make a greater commitment to working proactively in favor of students' interests.

It's partly that once they're in school they are obviously going to eat whatever is available. However, they are also offered healthy foods. I believe that, just like any school, the priority is on education, and diet is left more to the family. In the cafeterias they can ask, for instance, for foods like fruit, porridge, something healthy; however, we're brought up to eat badly, so this makes it difficult. It should be an extremely important point in classes for teenagers, because they're growing and eating but not eating the food they should. It's important but I also feel that often, from our childhood, or our homes, they also start us... some families get into the habit of giving them chips, Gansito cakes, cupcakes, candy, so it is often rooted in childhood, and it's important at all stages, from childhood and adolescence. (COBACH teacher)

Regarding food selection, some vendors said there were no regulations covering the type of foods that must be offered within schools. The only things they cannot offer are alcoholic drinks and cigarettes; they are free to sell any kind of food.

Heads of educational establishments often enter arrangements with companies like Coca Cola or PepsiCo. In exchange for obtaining exclusive

access to the school's cafeteria for its products, the company supplies the cafeteria with furniture.

They don't tell us what we can sell, except as far as drinks are concerned. Only one bottled soft drink can be sold, this is exclusively Pepsi ... We can't sell yogurt or juice. We used to sell yogurt, but later on we were told we couldn't. But bottled soft drinks yes, and we make horchata water³ and orangeade to help students a bit. To make it more affordable, because they often don't bring enough money to buy a soft drink. I only give them a glass of water, I don't give them a soft drink but a glass of water.

According to some food vendors at the schools, access to foods by adolescents is also limited by their scarce economic resources. This is particularly so for young people attending public schools.

Take the meals I do for teachers. I make them different breakfasts. Pastries and tostadas are more for students, because they're cheaper. Three tostadas costs \$6.00 and a glass of water at \$1.00 makes \$7.00, they eat very well. Three tacos cost \$10.00 because I sell them at \$3.50, but as that comes to \$10.50, I charge them \$10.00, since I know they don't bring any more money because they haven't got it. I also give them a glass of water, with that they eat well. For the teachers I make Swiss-style enchiladas, pork chops with green sauce, steak, Wiener schnitzel, huevos rancheros⁴, all that. Students don't ask for that because it costs \$15.00. Very rarely one says, "Oh, what a delicious breakfast." I make them roast meat, they begin to eat ... and they look at it, but no, they don't have the money. (seller, COBACH).

Diet and physical activity

Some young people report limited physical exercise and attribute this to a lack of time. Those

³ Drink made from rice soaked in water, blended and then mixed with sugar and milk, flavoured with vanilla and cinnamon

⁴ Corn tortillas topped with eggs (usually fried) covered in chili sauce

who do exercise are usually are involved in sports. This is more common among males.

Not now, but we used to play in the first semester. We don't have time now. (CBTIS, female)

We used to go in high school, but I'm no longer used to it, unfortunately I don't go any more. (CBTIS, female)

Here at school I play basketball. It's the sport I practice most. When I get home in the afternoon, my brother has some weights and I use them for weight-training. (COBACH, male)

I play football, basketball, volleyball and every day I walk here to school from the center. In the afternoons, as it can be quite hot, I walk here, there's no need to take the bus. I play basketball. (COBACH, male)

The disjunction between knowledge and practice with respect to physical activity does not imply a passive, resigned attitude to the risks implicit in an unhealthy diet.

Knowing about the potential consequences of unhealthy diets, some young people assume they can compensate through physical activity. It is striking that, however inappropriate the consumption of certain types of food, adolescents see physical activity as an appropriate countermeasure. They believe that excessive consumption of fats and carbohydrates can be compensated for by exercise, depending on the degree of commitment to it. Exercise's effectiveness in counterbalancing inappropriate dietary habits is a claim made more commonly by males.

My brothers eat quite a lot, but they don't need to diet because they exercise. We do exercise and play sports. (COBACH, males)

I eat quite a lot, I play football and train twice a week and drink plenty of water. I don't have any soft drinks, and chips are forbidden to me. If I fancy some now and then, I buy some.

“Supper’s ready”, “I’ve already had supper,” and she’ll say “I’m going downstairs, keep me company” like she’s eating, so I say “OK, make me some too,” I say to my mother, until I’m really full, then I look at my belly. Oh my god! It’s like I’ve had more than I thought. I start to feel sick, I’m not sure why. I think I’m overweight, but I know that what I’ve eaten, I’ll burn up in an hour, I go play tennis and that’s it. (Preparatoria del Estado, males)

To try and eat as well as possible, not too much and not too little, a balanced meal. We eat like that so as not to put on weight, because we also work in the fields and there you get plenty of exercise. (Rural community, females)

Gender plays a marked role in preferences regarding physical activity. Comitán is relatively conservative and there is a tendency to emphasize differences between men and women. However, this seems part of a more general discourse regarding female preoccupation with body image and fashion.

These gender differences are suggested by the way in which men judge women. Women are seen as being more fragile and more concerned about size and body image. If they become hungry during exercise women are thought to be more likely to go without eating or to consume large amounts of water.

I think women don’t like taking exercise because they’re more delicate.

Some start going to the gym and then stop. They say they put on weight because they eat more.

Yes, they get hungrier, exercise makes you hungry.

We don’t gain weight because we move more. For instance, before I used to exercise almost every day, I ate quite a lot and my weight was normal.

They just sit there, or chat, looking in the mirror...

These viewpoints are also accepted by some young women.

But they also say that, in time, women who exercise gain more weight. My sister used to exercise a lot and was quite plump, but she stopped exercising and now she’s really skinny. (Rural community, females)

To be honest, yes, it’s worrying because as the months go by, you put on weight, your clothes no longer fit properly. You go to the clinic and see what you weigh... If you go on a diet, you should be supervised by a doctor so that he can recommend which one to follow; it’s no good doing it just any old way. (Rural community, females)

Health problems derived from dietary practices

The dietary practices of our subjects were linked to health problems. It is noteworthy that diseases such as gastritis appear to be associated with not having the time to have meals at appropriate intervals.

We have gastritis because sometimes we don’t eat enough. Due to skipping meals... Sometimes because of school. (CBTIS afternoon, females)

Yes, gastritis, because of going hungry. Although water moves the liquid inside us and then the food doesn’t upset us so much.

Sometimes I eat and just an hour or two later I feel like eating again, my stomach feels empty.

I do have a problem because sometimes I don’t have time to eat. I have to go to work and don’t eat until night-time, so I have a problem because of that, also perhaps due to spicy foods, and kidney problems. (COBACH, females)

On the other hand, some of interviewees reported drastically modifying their diet in response to serious health concerns. This suggests to us that behavior change for health reasons results from

experiences which have made a strong impact on them.

In fact, that's why I became ill, because of not eating properly. All my life I've been eating nothing but junk food, 90% of my bones have become decalcified.

I would eat anything, nothing but junk food. I've already had symptoms of gastritis. I went to the doctor and he said I probably had gastritis, he couldn't be sure, that's when I became concerned and started to eat better. But once the discomfort had gone I went back to old habits. (Preparatoria del Estado, males)

Body image

Body image and all its socio-psychological implications figure prominently in the discussion of diet. For adolescents from rural communities, this is a concern not about body image *per se* but rather about their ability to carry out their daily work. This does not, however, mean that aesthetic concerns are wholly absent.

Because I'm tall, I seem older and my parents send me to work in a car workshop.

I feel good just as I am.

I feel good, I can do the things I want to do.

I weigh what I should.

I feel good, I'm whole and can move. (Rural area, Telesecundaria⁵ Tierra y Libertad, Yalumá)

In marked contrast to rural adolescents, those from urban areas see physical attractiveness as one of the many demands of society. Society creates a frankly competitive environment exerting great pressure on each individual. This is explained in the following quotation:

⁵ TV-based education program at high school level for rural communities

Both men and women worry because society expects that a man has money, a profession, is of good physique like you, not overweight, and good-looking. A woman must have a good figure. It's society above all that influences diet. (COBACH, males)

In general the interviewees' concerns about their bodies are closely linked to a desire to be attractive to members of the opposite sex. Women in particular are also subject to imperatives of body image and body size which are imposed by ever-changing fashions and the requirements of aesthetic paradigms. Adolescent boys make much of the greater female concern with slimness and note the competitiveness among girls in terms of their bodies. In this case, of course, we cannot ignore the impact of marketing on young people's lives.

In tune with the male view of female concerns, young women generally assume that males only notice certain parts of their bodies when deciding if they are attractive or not.

It should also be mentioned that in their more formal discourse young people accept that certain human virtues matter more than body image when considering a particular person as a potential partner. However, in reflecting, they recognize that their judgments of beauty are heavily influenced by predominant stereotypes.

Women fuss too much, they can even look anorexic. We men, however, don't care whether we're thin or fat.

Sometimes they feel embarrassed because their belly sticks out.

Or putting on hip-hugging pants that don't fit. (CONALEP evening, females)

Slim and well-proportioned, with a waist, slim with a good bottom and breasts, and good looking. The first thing they look at in a girl is her bottom, and whether she knows how to look good.

I'm 1.58 meters tall, last time I weighed myself I was around 58 kilos, but I feel plump, yes. (CBTIS, females)

I like my body the way it is, but if I had a wish it would be that my measurements were 90-60-90. (CBTIS, females)

When we see a woman, the first thing we see is her body. (CBTIS, males)

Image can be important in some jobs, to look anorexic has become more acceptable, with makeup and everything. (COBACH, females)

Many adolescents – and particularly the males – see women as under greater pressure over their physical appearance. This can lead to anxiety and even the adoption of risky behaviors. This vulnerability is simultaneously physiological, emotional, and psychological.

I think there are many things, such as size zero for women, which can make them very anxious. They follow the lead of top models, their personality makes them want to take on the image of certain people. For both men and women TV has a lot to answer for, since they're always saying you look better if you're slim, you look better if you exercise, in other words it's a fashion taken on by both men and women. (COBACH, males)

I think women are typically always looking after their bodies, they say they feel bad if they're fat and overeat. Yes, it's true and we can confirm that with diseases which have appeared recently, related to fashion, like anorexia and bulimia. Because of society, women say they want to have a slim body, which they also feel is good enough to be acceptable to society. I think it's partly for social acceptance and partly so that men find them attractive that they want to look pretty. The slim figure is mainly so that men notice them, and they can be the envy of other women.

We go on about the figure and, in doing so, damage their self-esteem, putting them at risk. They want to feel comfortable not for themselves, but to feel accepted by others. (CONALEP afternoon, males)

Women's anxieties about their bodies are, to a large extent, the result of contradictory pressures between health and aesthetic concerns. More fundamental, however, are the pressures that create these contradictory values. Adults may face similar contradictions but we can assume that the situation is more difficult for adolescents. At this stage in their lives adolescents are dealing with anxieties about being accepted and – perhaps principally – a desire to be attractive to the opposite sex. These become the main reasons for adopting risky practices such as dieting and/or fasting, taking medications, and certain physical activities.

Most comments on this topic were made by males. They thought carefully about the issue and mentioned various factors which interact and give rise to anxieties and risky practices among women. Their thoughts are based not just on social life in the abstract, but also on their own experiences with female friends and relatives, as these excerpts show.

Sometimes I watch TV, it can teach you certain things. Everyone wants to look good, and television makes it look easy. For instance, when advertising a product such as a light milk, they show a girl with a striking waist, and women buy these products because they want to look like the person in the advert. Coca Cola, for example, does a lot of advertising. (CORBACH, males)

I don't care whether she's plump or not, what matters is that we get on well, that she understands me. Of course I prefer them to be OK, but if she's too worried about her weight, then she won't want you to invite her to have some tacos, ha, ha!

But here in Comitán most girls are on the plump side; it must be the food, there isn't much choice.

The media's influence makes them want to have a slim figure. You never see a man in that type of advertising. When have you seen a man doing an advert for you to drink water?

Just as there are many women with bulimia. Have you ever seen or heard of a man with bulimia? Perhaps there are some, but it's definitely something that's more associated with women.

Women worry a lot about their appearance. In school they compete to see who's lost weight. You see them drinking water, because they say that if you drink water, you lose weight. But they don't do any exercise, so they don't lose weight at all. But they still carry on drinking water. (Colegio Mariano N. Ruiz, males)

Discrepancy between knowledge and practice

Adolescents in our study recognize the difference between healthy and unhealthy diets. They know that in many ways their diet is not the best. They are not totally unaware of the different factors affecting what they eat, contradictory as they may be. They understand that they are prey to marketing and that their habits conflict with their knowledge.

At times we see a conscious and fatalistic understanding. Despite the timid resistance that they and their families might put up, there are many forces in their lives over which they have no control:

Actually, we know that it's not a good diet, but there isn't much choice in Comitán. Tacos, sandwiches and fried snacks are on sale everywhere. It also has to do with what the parents are like. When they have small children, they might say to them, "If you shut up and behave, I'll let you have your chips". Or they take them to have a hamburger, because they will definitely eat that, unlike other food perhaps, which they might refuse. I think diet depends on age. Parents have eaten junk food in the past and now they're concerned about

eating healthily. (Colegio Mariano N. Ruiz, males)

At home it's healthy, but in the street, yes, it's rubbish, but one is hungry, so... You just feel like having one because other people are doing so, or because it smells delicious. (CBTIS afternoon, males)

The media keep telling us that drinking water aids digestion and is good for our bodies. The media do influence our choice of food. They were talking about chips and many foods like that, another is soft drinks, they're all carbohydrates. That would be a bad eating habit because we're taking in all those carbohydrates and they'll make us ill. Carbohydrates contain fats, sugars, salts and all those compounds which cause many diseases. Just like we have a habit of going to fast food joints, going to shops where they sell pastries, stuffed tortillas, tostadas and stuff, and soft drinks, and that's bad.

Discussion and conclusions

The predominant discourse in public health is based on an epidemiological model which uses concepts such as risk behaviors and lifestyles. This model not only masks the complexity of processes surrounding the issue of nutrition, but also legitimizes the expectations of health care institutions by delegating responsibility for health to each individual. The recent emergence of obesity and its risks as health priorities has tended to reflect this particular model. It is viewpoint that seems to favor those interests who would like to spend less on public health. The interviews provided by the adolescents in our study present a different viewpoint. Nutrition is a complex phenomenon which involves several dimensions.

At the macro level diet is related to global economic policies and the processes derived from them. These include demographic growth, technological development, economic development, urbanization, migration, environmental degradation, and so on. The cultural consequences of globalization affect multiple arenas of human interaction.

Dietary practices among adolescents in Comitán are not exempt from the effects of global and regional development. Nor are adolescents the only ones who are affected. However our interviews clearly demonstrate the ways in which educational policy, itself a manifestation of the larger social processes, affects adolescent dietary practices in a direct way.

At a more individual level, the interviews demonstrate the impact of predominant cultural discourses on adolescents from a wide range of backgrounds. As whole these discourses manifest the permanent contradictions among prevailing (yet ever-shifting) values within modern society. They have a profound combined impact on certain practices associated with adolescent health and body image. These contradictions provide us with a glimpse of the struggles among the dominant interests in a consumer society which sees young people an object to be fought over.

Adolescents stand in the thick of this tension and they are not wholly unaware of its significance. They accept as inevitable the discrepancy between what they know and what they do. They perceive their day-to-day existence, experienced through their discourses and the settings in which these take place, as something given and unalterable.

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