

Urban Food Environments through the Lens of Adolescents in Addis Ababa, Ethiopia

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Obesity among children and adolescents is on the rise globally and is expected to overtake undernutrition as the leading form of malnutrition among adolescents as soon as 2022. This trend is of particular concern because of the importance of the adolescent period to an individual's overall health and nutritional status. Adolescence (10 to 19 years old) has been identified as a second "catch-up" window for growth, after the first 1000 days of life. During adolescence, nutritional needs increase and dietary habits and preferences are formed. In addition, young people begin to exercise a degree of autonomy for the first time during this period of life, including beginning to make food choices for themselves.

The importance of nutritional habits and impacts during adolescence stands in stark contrast to the relatively small amount of research that has focused on how adolescents make food choices, and what factors influence those choices, such as physical and economic access to food, food safety and quality, and advertising. Assessing adolescents' views of their food environment—to provide a better understanding of the factors shaping their food choices—could help improve identification, design, and implementation of interventions and policies for improving adolescents' access to healthy diets. For this age group, healthy diets are critical not only to their current health, but to their health and habits throughout their adult lives.

Ethiopia is urbanizing rapidly, with significant impacts on how and where people interact with food—that is, their food environment. In many low- and middle-income countries (LMICs), urbanization is accompanied by an increase in meals eaten away from home, including street foods, and a rise in the availability and consumption of ultra-processed foods. Ultra-processed foods are foods that are energy-dense, high in fat, refined starch, sugar, and salt, and poor sources of micro-nutrients. While rates of obesity remain low among Ethiopian adolescents at present, in other LMICs, these trends have often been followed by an increase in obesity rates.

To generate information on the factors influencing adolescents' food choices, researchers from Addis Ababa University in Ethiopia, the French National Research Institute for Sustainable Development (IRD), and Wageningen University & Research in the Netherlands conducted a study that invited adolescent secondary school students in Addis Ababa to share their

KEY MESSAGES

- In a recent study, adolescents living in Addis Ababa reported that food safety and affordability were their top concerns when making food purchases.
- Nutrition was a secondary concern: the students reported that even if the food sold were healthy, they would not purchase it if the vendor or outlet did not appear clean.
- Packaged foods were often perceived as healthy choices among the adolescents because they have labels featuring information such as expiry dates and the packaging is perceived to protect these foods from germs.
- Involving adolescents and their families in future research, programming, and interventions can help convey messages about the importance of nutrition.
- Providing clean, affordable, and healthy food options in and around schools can help ensure adolescents are able to choose and consume foods that meet all these important criteria.
- Ensuring that the food-based dietary guidelines under development in Ethiopia are used to provide nutrition education could help adolescents apply the guidelines in their daily life.

perceptions and opinions on what informs their food choices. The students shared their views using both words and photographs that they took to illustrate the factors that influence them.

Innovative methodology

This study was conducted to help fill the knowledge gap around behavior related to food choices during the critical period of adolescence, and around the factors that influence adolescents' food purchase and consumption decisions. The researchers worked with 26 students between the ages of 14 and 19 who were attending one government and one private school in Addis Ababa. Researchers explored the following two questions with these adolescents:

1. What are the challenges in your environment to eat healthy?
2. What are the opportunities in your environment to eat healthy?

Participants gave their thoughts on these topics using Photovoice, a method that invited the adolescents to express themselves

through words and photographs. This provided an informative way of understanding the issues that affect the choices students make through their own eyes. Researchers guided them through three stages of the Photovoice method:

1. Selecting the photographs that best reflected their perception of an issue.
2. Contextualizing, or explaining, the context of the photographs.
3. Categorizing, or identifying the issues, themes, and theories emerging from the photographs.

The students took photos that best reflected their thoughts on the two survey questions. They were then interviewed individually and as a group to discuss the meanings behind their photographs.

Key findings

Through the process of viewing and discussing the photographs, researchers gained a better understanding of what influences purchase and consumption decisions among these adolescents living in Addis Ababa, as well as their feelings about autonomy, health, and other matters.

The adolescents felt they had little decision-making power, since their families, and particularly their mothers, have most of this control. Mothers tend to do most of the cooking and, as a result, have most of the influence, which the adolescents did not always appreciate.

However, these young people are at an age when they are beginning to make some of their own food purchases and consumption choices. They shared through their photographs and conversations that the cost of food and food safety were major factors influencing those choices.

Due to financial limitations, they considered certain foods out of reach, such as meat and fish. They noted that unhealthy foods, such as sweets and frying oil, are cheap, while nutrient-rich foods are rarely affordable. Some shared that, in the neighborhoods where they live, some food outlets are unaffordable, limiting their options to street foods, which are often of poor nutritional quality.

Regardless of affordability, however, if food outlets did not appear clean and neat, the adolescents perceived them to be unhealthy. Informal roadside vendors were unanimously viewed in this way. This barrier presents an interesting dilemma: when the students perceived a vendor or place as unhealthy, it prevented them from buying even potentially healthy foods, such as fruits and vegetables.

Concerns over food safety also spilled over into their homes. The students reported a lack of water at home, preventing them from washing fruits and vegetables before eating them, a problem which could further influence their consumption of these foods. They reported that not only did their concern for safety and hygiene sometimes prevent them from eating healthy foods,

but it could also push them into buying packaged foods that are often ultra-processed and nutritionally poor. They felt that the packaging protects the food from germs, and they also appreciated the information on the labels, such as expiry dates.

Overall, while mothers played an important role in adolescents' food choices, in making their own choices, adolescents were primarily influenced by poor hygiene and sanitation of food outlets, their community and home environments, and the price of foods. They were most drawn to foods that are affordable, available, and perceived as clean, in the immediate vicinity of their homes and schools, even if that meant consuming more packaged food, which may include nutritionally poor ultra-processed products.

Lessons for future action

This study revealed that the adolescents emphasized food safety and affordability as important considerations in their food choices. However, attention to these concerns comes at the expense of attention to another critically important factor: nutrition. This imbalance could put these young people at risk in the future for higher levels of overweight, obesity, and the associated noncommunicable diseases. Researchers identified several actions that could help ensure that adolescents give greater consideration to nutrition when making their food choices:

- Consult and involve adolescents in future research and programming, recognizing them as important stakeholders who are knowledgeable about potential problems in their food environment.
- Closely involve both mothers and fathers in any nutrition interventions targeting adolescents to ensure understanding of the benefits and drawbacks of different food choices.
- Increase access to healthy, affordable, and safe foods in and around schools through enforcement of food safety guidelines for informal vendors and for school canteens.
- Tax unhealthy foods, such as sugar-sweetened beverages, and/or directly provide or subsidize healthy foods such as fruits and vegetables, while restricting sales of energy-dense, nutrient-poor snack foods in school compounds.
- Ensure that the Ethiopian national food-based dietary guidelines now under development contribute toward improving adolescent diets, and that this age group receives nutrition education on what the guidelines mean and how to use them.

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