

The High Price of Food Exacts a High Price on Low-Income Children's Weight

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Amid growing concern over childhood obesity, policymakers have begun to wonder what role federal food programs can play in combatting obesity in children. Approximately one-third of U.S. children are overweight and 16 percent are obese. Low-income children are at particular risk, as income has long been associated with obesity.



Many low-income children are the beneficiaries of federally subsidized food programs, whether through a family's use of food stamps (now called Supplemental Nutrition Assistance Program, or SNAP), subsidized school breakfast or lunch programs, meals served in federally supported child care centers, or the Supplemental Nutrition Program for Women, Infants, and Children (WIC). In fact, as of 2008, one-half of all U.S. children will participate at some point in SNAP alone, including 90 percent of African American children.

Rachel Tolbert Kimbro and Elizabeth Rigby, in their RIDGE paper (later published as a note in *Health Affairs*), find that the programs do have an effect on childhood obesity, but the effect depends largely on the cost of living in the city or town where one lives.¹

Past Findings Are Mixed on Whether Food Assistance Programs Contribute to Obesity

The nation's food-security programs are designed to help low-income families stretch their food budgets. The SNAP program, for example, loads a debit card with a set amount each month that eligible families can use to buy groceries. Through the WIC program, low-income mothers of infants can receive formula and food packages as well as information on breast-feeding, diet, and other health issues concerning their children. Later, as low-income children enter their preschool years, they can receive healthy snacks and meals at certain child care centers through the Child and Adult

Policy and Childhood Obesity: A Solution or Part of the Problem?" *Health Affairs*, vol. 29, no. 3 (2010): 411-418.

¹ Rachel Tolbert Kimbro and Elizabeth Rigby, "Federal Food

About this report

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Care Food Program. Once children reach school age, they can take part in the School Breakfast Program or the National School Lunch Program, which provides meals that adhere to nutritional requirements.

Because these programs reach children at young ages, and influence which foods they eat, they have strong potential to combat obesity. Yet in recent years, evidence has emerged that some of these programs may have counterproductive effects. The SNAP program in particular may be associated with increased Body Mass Index (BMI)—a key measure of weight and obesity—for women.² Another study, however, finds that for girls living in “food-insecure” households, participation in the school lunch programs reduces weight gain.³ Another analysis notes the school breakfast program improves nutritional quality in students’ diets, while another concludes that children who regularly eat a school lunch have much higher rates of obesity than children who bring lunch from home.⁴ Clearly the jury is still out on government food programs’ impact on obesity.

The Importance of Cost of Living in Determining Programs’ Effects

One aspect of food programs often overlooked in past studies is the role of cost of living. SNAP benefits, for example, do not generally rise and fall with the local cost of living. In cities with high cost of living, recipients may resort to lower-cost, less nutritional foods. This, in turn, may contribute to obesity. It is unclear in prior work whether it is the receipt of SNAP itself that leads to obesity or whether this effect is simply more pronounced in high cost-of-living cities.

2 See, for example, M.S. Townsend et al., “Food Insecurity Is Positively Related to Overweight in Women,” *Journal of Nutrition*, vol. 131, no. 6 (2001): 1738-45; D. Gibson, “Food Stamp Program Participation is Positively Related to Obesity in Low Income Women,” *Journal of Nutrition*, vol. 133, no. 7 (2003): 2225-31; J. Zagorsky and P. Smith, “Does the U.S. Food Stamp Program Contribute to Adult Weight Gain?” *Economics and Human Biology*, vol. 7, no. 2 (2009): 246-58.

3 S. Jones et al., “Lower Risk of Overweight in School-Aged Food Insecure Girls Who Participate in Food Assistance,” *Archives of Pediatric and Adolescent Medicine*, vol. 157, no. 8 (2003): 780-84.

4 J. Bhattacharya et al., “Breakfast of Champions? The School Breakfast Program and the Nutrition of Children and Families,” *Journal of Human Resources*, vol. 41, no. 3 (2006): 445; D. Schanzenbach, “Do School Lunches Contribute to Childhood Obesity?” Working paper, University of Chicago, Harris School of Public Policy, 2005.

One of the unique components of this study is that the authors take cost of living into account in their examination of the association between food assistance programs and obesity.

Food Programs Are Linked to Higher Childhood Obesity in High-Cost Cities and Lower Obesity in Low-Cost Cities

Indeed, the authors find that food assistance programs as a whole may contribute to childhood obesity only in cities with high food prices—specifically for those families with the lowest incomes (less than 130 percent of the poverty line).⁵ Children in families with incomes at 185 percent of the poverty level see no effect of food assistance programs on their BMI.

In contrast, in cities with low food prices, food assistance programs help reduce obesity for the lowest income families.⁶ Again, those with incomes at 185 percent of the poverty line see no effect of food assistance programs.

Programs with Dietary Mandates Are More Effective in Combating Obesity

Certain programs are more influential than others. Specifically, the snacks and meals provided at day care centers or school lunches are effective in reducing obesity among children, in both families at the lowest income (130 percent of poverty) and slightly higher incomes (180 percent of poverty). In

cities with low food prices, the school programs are most effective in reducing obesity among young children. In contrast, for the lowest-income families, SNAP is associated with greater childhood obesity in cities with high food prices. It has no effect on children in low-cost cities. WIC has no discernible effects on childhood obesity in either high- or low-cost cities. Overall, the findings suggest that in cities where food is more expensive, federal food assistance programs (and in particular SNAP) may be contributing to early childhood obesity. In low-cost cities, they may be deterring it.

5 Cities with high food prices include Boston, MA; Chicago, IL; Detroit, MI; Jacksonville, FL; New York City; Newark, NJ; Oakland, CA; Philadelphia, PA; Richmond, VA; and San Jose, CA

6 Cities with low food prices were Austin, TX; Baltimore, MD; Corpus Christi, TX; Indianapolis, IN; Milwaukee, WI; Nashville, TN; Norfolk, VA; Pittsburgh, PA; San Antonio, TX; and Toledo, OH

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Policy Implications

Clearly, when talking about the effects of food assistance programs, it is important to distinguish between programs and between places. Certain programs, such as the school lunch and child care meals, are helping children to keep their weight in check. Subsidizing meals with set dietary guidelines therefore appears an effective policy in helping to reduce obesity, at least for young children.

To have an impact on childhood obesity, other policies might include greater outreach to child care providers, given the effectiveness of the food assistance programs. Currently, many do not participate in the Child and Adult Care Food Program. Providing schoolwide presumptive eligibility for Title I schools (those with large low-income populations) and instituting summer food programs for school-aged children and their families are other options. Further increasing the nutritional value of food in all assistance programs also seems warranted.

Finally, any efforts to stem childhood obesity must take into account the cost of living in cities. Currently, SNAP benefits are higher in extremely high cost-of-living areas (Alaska, Hawaii, Guam), but the Food and Nutrition Service, USDA may wish to explore cost-of-living supplements in higher-cost cities as well. In addition, programs that subsidize the purchase of fruits, vegetables, and other healthy foods for SNAP recipients may be warranted.

Study Description

The authors examine the effects of food programs on children ages three to five from 20 of the largest cities in the United States. The children were part of the Fragile Families and Child Wellbeing Survey, which followed a group of low-income children from birth to age 5. The authors generated a measure of any form of food assistance plus three additional measures for each program: WIC, SNAP, and the child care/school meals programs. They estimated the effect of each type of food assistance program, controlling for simultaneous participation in other programs (to net out their effect on the results). Cities with high food prices were those that scored above 103 on the 2003 American Chamber of Commerce Researchers Association (ACCRA) grocery cost-of-living indices.

The authors used individual fixed effects to account for any selection effects from characteristics that affect both a child's weight and the family's eligibility for food assistance programs. They also controlled for a range of factors that might have changed as children aged that could influence either the use of food assistance programs or weight.

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