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Welcome to the first issue of Food Insecurity and Hunger in the U.S.: New Research, a new periodical created in collaboration by the Food Research and Action Center and Children’s HealthWatch. This periodical will be published primarily electronically, three times each year. It will summarize recent and important food insecurity and hunger research from academia, government agencies, think tanks and health and policy organizations to ensure that the newest, most interesting, and most important research is accessible and reaches a wide audience.

In each issue, IN FOCUS will have one or two syntheses of current research on a featured topic. This issue features research on SNAP and food insecurity. NEW RESEARCH consists of eight to ten summaries per issue of new and interesting research on food insecurity with links to the full article or report. Additional content will include special analyses and new resources and tools.

This periodical is intended for advocates, policymakers, researchers, journalists, nutrition program providers, educators, health professionals and others who care about these issues. We hope it will be a useful resource for everyone working to determine what hunger and food insecurity mean to people in our country, and why and how to end these persistent problems.

We gratefully acknowledge the support of the ConAgra Foods Foundation for making this periodical possible. We look forward to your comments and suggestions so that we can improve future issues.

Jim Weill, President, Food Research and Action Center

Justin Pasquariello, Executive Director, Children’s HealthWatch

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IN FOCUS:

Solutions to Food Insecurity: The Evidence for SNAP

Food insecurity, the inability to access enough nutritious food to maintain a healthy and active life, is one of the leading nutrition-related public health issues in the United States. In 2011, more than 16 percent of the US population, including more than 16 million children, lived in households that experienced food insecurity.
This silent epidemic disproportionately affects families with young children—slightly more than one in five families with children under age six experienced food insecurity. Even when experienced at the mildest levels, food insecurity threatens the physical and mental health and well-being of Americans across the lifespan. For instance, food insecurity during pregnancy increases babies’ risk of being born low birth weight and with neural tube defects, and during early childhood increases young children’s risk of poor health, hospitalizations, iron-deficiency anemia, and developmental delays. Food insecurity increases older children’s risk of having behavioral problems, low academic achievement and, for adolescent boys, lower bone density. In early life, food insecurity can also act as a toxic stress, damaging the architecture of developing brains and putting adult survivors at higher risk of developing diabetes and other chronic diseases. Later in life, food-insecure seniors are more likely to be in poor health, have poor nutrition status and lower quality of life than food-secure peers.

The Supplemental Nutrition Assistance Program (SNAP, formerly food stamps): its impact and reach

One of the most important ways to tackle food insecurity in the U.S. is to improve access to the Supplemental Nutrition Assistance Program (SNAP). The program has a long track record of reducing poverty and producing positive medical and educational outcomes. SNAP improves children’s health and development beginning at birth and continues to be a positive influence into adulthood, buffering adults from chronic diseases, like diabetes and cardiovascular disease. Furthermore, recent research shows SNAP reduces food insecurity.

SNAP is a “kitchen table” intervention – providing resources for food to be eaten in family meals at home. It is also a market-based intervention, using commercial channels to improve the health of vulnerable groups and bring money into local communities. Currently, SNAP reaches more than 47.6 million people, including people of all ages, races, and geographic areas. Almost half of all participants are children (47 percent) and 8 percent are elderly. Forty-one percent of SNAP participants are in households with at least one employed adult. Unfortunately, about one in four people eligible for SNAP go unserved.

New analytic approaches to SNAP’s impact

Quantitative Approach: In the past, SNAP’s effectiveness was called into question as participants reported having high levels of food insecurity and poor health. This seemingly paradoxical situation arises from selection bias – in other words, those who most desperately need the help (are the poorest and/or the most food insecure) are also most likely to seek assistance. However, findings from recent research in which the problem of selection bias was dealt with in careful analysis, demonstrate that SNAP – especially at higher benefit levels - decreases the rate and severity of food insecurity. For example, Kreider et al. used innovative statistical techniques to show that when participation reporting errors and other factors were accounted for, SNAP demonstrably
decreased food insecurity, particularly child food insecurity, and other adverse health outcomes.\textsuperscript{26} Mathematica also addressed this issue in their recent report and showed, using both cross-sectional (point in time) and longitudinal (over time) designs, that six months of SNAP participation significantly improved household and child food security for all but the most food-insecure children.\textsuperscript{27}

Qualitative Approach: A recent report from USDA based on qualitative interviews with SNAP participants found that SNAP eases a household’s financial strain by freeing up resources that would have been spent on food to be redirected toward other essential expenses (e.g., rent, heat, or medicine).\textsuperscript{28} A sudden income shock such as a job loss or serious illness, strained many participating families’ financial situations, and expenses were subsequently greater than household income. In addition, many families reported high recurring expenses, such as prescription drugs or special dietary needs. Families adopted a variety of coping strategies to make ends meet, including: restricting and/or skipping food intake (particularly common among parents trying to buffer their children from having to go without food), accessing emergency food resources (e.g., food pantries), and savvy shopping practices (e.g., planning menus around sales, going to multiple stores to get the best prices). Despite serious hardships, SNAP helped families to make it through tough times and protect their children from going without food.

The SNAP benefit amount is crucial, but currently inadequate

SNAP’s primary weakness is that benefits are not adequate to end food insecurity for most families. Essentially, the dose is not sufficient to treat the illness. Many families who receive SNAP struggle as the end of the month approaches and their food supplies dwindle – the SNAP benefit is not enough to get most families through the whole month,\textsuperscript{29} let alone to allow them to buy the foods needed for a quality diet.\textsuperscript{30} Benefits are inadequate, in part, because they are based on the USDA’s impractical Thrifty Food Plan (TFP), which USDA defines as a nutritious diet at a minimal cost. Research conducted across several East Coast cities consistently shows that the maximum SNAP benefit is not enough to buy the foods that make up the TFP, much less a diet that meets current understanding of a healthy diet.\textsuperscript{31, 32, 33}

The Institute of Medicine (IOM) recently published an extensive scientific report based on nationwide data that reached the same conclusion – the current SNAP benefit is inadequate and the calculation must be revisited.\textsuperscript{34} However, a higher benefit is effective in improving food security and food purchasing power. In recently released results of a pilot study, when participants were given earned incentives for buying more fruits and vegetables (an extra $0.30 for every $1 of qualifying purchases), fruit and vegetable consumption increased by 25 percent.\textsuperscript{35} Moreover, after the SNAP benefit was increased temporarily in 2009 for all recipients as part of the American Recovery and Reinvestment Act (ARRA), among low-income households, food insecurity decreased, food expenditures increased\textsuperscript{36} and young children’s health improved.\textsuperscript{37} Unfortunately, this increase is scheduled to be eliminated in November 2013.\textsuperscript{38} A 10 percent decrease is estimated to increase food insecurity by approximately 29 percent and will be especially problematic for households that receive larger SNAP benefits, as
they rely more heavily on SNAP for their food purchases.\textsuperscript{39}

\textit{Conclusions}

The totality of the research evidence points to the need for a proactive approach to food insecurity in the U.S. SNAP protects against food insecurity and supports the health of our nation, from its youngest to its oldest citizens. It is therefore critical that we protect and strengthen SNAP, increase access to SNAP, and improve benefit levels to protect the health and well-being of vulnerable Americans.


\textsuperscript{10}Eicher-Miller HA, Mason AC, Weaver CM, McCabe GP and Boushey CJ. Food Insecurity Is Associated with Diet and Bone Mass Disparities in Early Adolescent Males but Not Females in the United States. \textit{J. Nutr.} 2011; 141(9): 1738-1745.


26U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and
NEW RESEARCH:

Food Insecurity and Chronic Disease

Laraia summarized the existing evidence on the relationship between food insecurity and diet, weight gain, and chronic disease and proposed a framework for considering how the lived experience of food insecurity may increase the likelihood of developing chronic diseases. The review and framework indicate that food insecurity during critical periods of child development and pregnancy may result in the development of chronic disease by activating a stress response among individuals at crucial periods in a food–impoverished environment. Life course stage at the time of exposure, stress, genetic
factors and the food environment appear to affect the strength of the impact of food insecurity on chronic disease.

Understanding the extent to which food insecurity and chronic disease coexist (with poverty being a common causal mechanism), or whether food insecurity drives the development of chronic disease, remains unsettled. The literature on associations between household food insecurity and dietary intake indicates that households do face episodic shortages and there is a modest association between food insecurity and lower fruit and vegetable intake. While there was no consistent finding in this study about the relationship between food insecurity and weight status for men and children, there was an association between higher weight status and food insecurity among women. There also were consistent relationships between food insecurity and both diabetes prevalence and poor diabetes management. Longitudinal data analysis is needed to establish a causal relationship and the sequence of events between exposure to household food insecurity and the development of chronic disease.


U.S. Households With Children Are Exposed to Nonpersistent Food Insecurity

In a study of ongoing vs. episodic food insecurity among children who had been followed since early childhood, between kindergarten and eighth grade, one third of the approximately 7000 households in this study sample experienced some form of food insecurity at least once, and 13 percent experienced persistent food insecurity. Children in persistently food insecure households are more likely to live in persistent poverty, be from single parent households, have a parent who is less educated, and be members of racial or ethnic minorities. Children in the West and South regions, and from urban areas of the U.S., are more likely to experience persistent food insecurity.

Using data from the Early Childhood Longitudinal Study-Kindergarten cohort, Burke et al. quantified the extent to which children were exposed to food insecurity across middle childhood in the United States, and examined disparities in the prevalence of nonpersistent and persistent food insecurity among these households. Previous longitudinal analyses of these data have been limited to three time points, which makes it difficult to fully examine and understand the reality of household food insecurity in the United States. This study adds to the literature by examining food security status at four time points between 1999 and 2007. Next steps would assess overlap among the disparities to determine if persistent food insecurity is a marker for accumulation of more general family hardships. The high prevalence of food insecurity found in this nationally representative sample (35% of the sample was ever food insecure as opposed to earlier longitudinal studies which found 22% and 14% of households sampled to be ever food insecure) suggests that policy makers and other actors should focus on effectively alleviating both long-term and short-term food shortages and linking children and
families who are experiencing food insecurity to appropriate resources.


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**An Overview of the Effectiveness of Various Approaches to Addressing Food Insecurity in the United States**

In this report, the author considers how five factors (participation in the Supplemental Nutrition Assistance Nutrition Program (SNAP) and the National School Lunch Program (NSLP), use of emergency food assistance programs, lowering food prices, and improving financial management skills) can lead to reductions in food insecurity. All five programs/actions are found to have a demonstrable impact on food insecurity—SNAP, NSLP and the use of emergency food programs improve households purchasing power, and lowering food prices and the improving financial management skills can help a household become food secure even if there is no change in resources available to purchase food.

The many established negative health effects of food insecurity in the United States (e.g. anemia, asthma, and hospitalizations) make its high prevalence an important nutrition-related public health issue. To avoid unintended counter-productive consequences, proposals to modify the structure of SNAP, NSLP and the emergency food programs (e.g. restricting food choice) should carefully consider the consequences of such modifications on the food security of households in the United States. SNAP participants are between 14.9 percentage points and 36.6 percentage points less likely to be food secure than similar non-participants. Children participating in NSLP are between 2.3 and 9.0 percentage points less likely to be food insecure than similar non-participants. The author estimates that the range of impact of food banks on food insecurity is to reduce its prevalence by 2.5 to 6.1 percentage points, or using a different method, 2.3 to 9.0 percentage points, and suggests that a formal evaluation of the impact of emergency food assistance should be completed.

In areas where food prices are $10 higher than the cost of the Thrifty Food Plan (TFP), the author found 8.4 percent and 15.9 percent increases in adult and child food security respectively. A five-item financial management skills scale was used to assess the effect of management skills on disposable income. For the five-item scale, a one unit increase was roughly equivalent to having about $370 more per month in income. The author discusses how foundations, food banks, policy makers, program administrators and advocates can enhance the effectiveness of these five interventions in alleviating food insecurity.

**An Overview of the Effectiveness of Various Approaches to Addressing Food Insecurity in the United States.** Craig Gundersen.
A recent USDA report based on qualitative interviews of 90 SNAP households with children in six states finds that food and other expenses often exceed income in SNAP households, and many struggle despite having access to the social safety net and using belt-tightening strategies (e.g., keeping the lights off to lower the utility bill). However, SNAP helps ease recurring and episodic financial strain and allows families to eat a healthier, more consistent diet.

Respondents also report using a number of reactive and proactive coping strategies to avoid food hardship, such as restricting food intake, altering the kinds of foods consumed, turning to social networks or emergency food resources for assistance, using savvy shopping strategies, and trying to stretch SNAP benefits throughout the month. However, with regard to the latter, many households compromise on nutrition and variety in their diets in order to make food resources last for the entire month, and would shop differently (e.g., buy more fresh produce) if their food budgets allowed it. And respondents, especially the least food secure, often complained that their SNAP benefits are exhausted within two or three weeks. Finally, while parents try to provide nutritious, balanced meals for their children, many report restricting their own food intake or skipping meals to ensure that their children have enough to eat throughout the month.

A Longitudinal Study of Food Insecurity on Obesity in Preschool Children

According to a longitudinal study of more than 28,000 low-income children in the Massachusetts WIC program, household food insecurity during infancy and persistent household food insecurity, ever without hunger, in infancy and early childhood were each associated with weight-related outcomes at 2 to 5 years of age in statistical models that controlled for a number of sociodemographic and health factors (e.g., gender, race-ethnicity, birth weight, maternal age, maternal education). However, these associations varied by the mother’s pre-pregnancy weight status. More specifically, compared to those persistently food secure during infancy, household food insecurity without hunger during infancy was linked to higher adjusted mean BMI-for-age z scores at 2 to 5 years of age among children with mothers who were overweight or obese before pregnancy, but not among children with mothers who were underweight or normal weight before pregnancy. Furthermore, persistent household

food insecurity without hunger during infancy and early childhood was associated with 22 percent greater odds of child obesity at 2 to 5 years of age, in comparison to children from persistently food secure households. However, these odds also varied with the mother’s pre-pregnancy weight status: children from households with persistent food insecurity without hunger were three times more likely to be obese if the mother was underweight and 34 percent more likely to be obese if the mother was overweight or obese, when compared to children from persistently food secure households.


Food Hardship in America 2012: Data for the Nation, States, 100 MSAs, and Every Congressional District

According to new data from the Food Research and Action Center (FRAC), 18.2 percent of Americans said in 2012 that there had been times over the past 12 months that they did not have enough money to buy food that they or their families needed. This food hardship rate of 18.2 percent was virtually unchanged from the rates in 2009, 2010, and 2011, as families continued to struggle with under- and unemployment, low wages, and inadequate government supports.

FRAC’s latest food hardship report analyzed national, regional, state, metropolitan statistical area (MSA), and Congressional District data that were collected by Gallup and provided to FRAC. The data were gathered as part of the Gallup-Healthways Well-Being Index project, which has been interviewing almost 1,000 households daily by telephone since January 2008. FRAC analyzed responses to the question: “Have there been times in the past twelve months when you did not have enough money to buy food that you or your family needed?” (In the report, responses of “yes” reflect food hardship.) In addition to the national food hardship rate of 18.2 percent for 2012, the report finds that, as in previous years, the Southwest and Southeast regions of the U.S. were the hardest hit in terms of food hardship, both having rates of 21.1 percent. In addition, 20 states, 170 Congressional Districts, and 16 of the 100 largest MSAs had food hardship rates of at least 20 percent. The authors conclude that food hardship rates are too high in every corner of the nation, and that it is critical for the nation to move toward full employment, strengthen wages, and develop public supports to decrease these rates.

Food Hardship in America 2012: Data for the Nation, States, 100 MSAs, and Every Congressional District (pdf). Michael Burke, Heather Hartline-Grafton, and Jim Weill. Food Research and Action Center, 2013.
Food Hardship 2008-2012: Geography and Household Composition. Data for the Nation, States, Regions, and 100 MSAs

According to data from the Food Research and Action Center (FRAC), on average, 23.5 percent of households with children and 15.1 percent of households without children reported food hardship between 2008 and 2012. That is, they reported that they did not have enough money to buy the food that they or their families needed. This gap, about 8 percent, shows that families with children had a harder time with food hardship during the Great Recession, which began in 2008.

FRAC’s latest food hardship report analyzed national, regional, state, and metropolitan statistical area (MSA) data that were collected by Gallup and provided to FRAC. The nationally representative data were gathered as part of the Gallup-Healthways Well-Being Index project, which has been interviewing almost 1,000 households daily by telephone since January 2008. FRAC analyzed responses to the question: “Have there been times in the past twelve months when you did not have enough money to buy food that you or your family needed?” (In the report, responses of “yes” reflect food hardship). The report finds large disparities between households with and without children at all levels. Within households with children, the Southeast, Southwest, and Western regions had the worst food hardship rates among regions, all of which were 25.4 percent or greater. Among households with children, Mississippi, Washington, D.C., and Alabama had the worst food hardship rates among states, all of which were 30.0 percent or greater. Within households with children, Lakeland-Winter Haven, FL, Bakersfield, CA, and Cape Coral-Fort Myers, FL had the worst food hardship rates among the largest 100 MSAs, all of which were 30.5 percent or greater. The authors conclude that resources should be directed at eliminating food hardship among all members of society, regardless of household composition or geography because the developmental, economic, and social consequences are too great.

Are Food Insecurity’s Health Impacts Underestimated in the U.S. Population? Marginal Food Security Also Predicts Adverse Health Outcomes in Young U.S. Children and Mothers

Most prior research looks at the effects of moderate food insecurity and deep food insecurity on households members, but less attention has been paid to whether marginal food security is harmful. In examining the epidemiological and public health implications of categorizing as food insecure those young children and their adult female caregivers living in U.S. households with marginal food security as measured by surveys, all studies reviewed by Cook et al. found that marginal food security is a significant predictor of adverse health outcomes in children or their mothers. Also, new
research conducted by Children’s HealthWatch, included in the article, suggests that marginal food security is associated with the same negative child and maternal health outcomes as food insecurity, but that the magnitude of these associations are intermediate between food security and food insecurity (acting as a dose response).

Using data from the household survey administered from June 1998 to December 2011 by the Census Bureau, Children’s HealthWatch examined the associations of “marginal food security” with health and developmental risk in a low-income, sentinel sample of over 41,000 young U.S. children (less than 48 months of age) and their adult female caregivers. When comparing the effect of the marginally food-secure children’s fair/poor health and developmental risk, and the caregivers’ depressive symptoms and fair/poor health with those in food-secure and insecure families, there were child health associations of marginal food security significantly and distinctly intermediate between those of food security and food insecurity. The authors concluded that marginal food security should be considered a separate adverse category and not combined with either food security or food insecurity.


Supplemental Nutrition Assistance Program: Examining the Evidence to Define Benefit Adequacy

The Institute of Medicine of the National Academy of Sciences, at the request of the U.S. Department of Agriculture (USDA), undertook a study to examine the feasibility of defining the adequacy of SNAP allotments. Currently, SNAP allotments are based on USDA’s Thrifty Food Plan (TFP), which USDA defends as a nutritious diet at a minimal cost. In its report, the IOM Committee on the Examination of the Adequacy of Food Resources and SNAP Allotments concluded that SNAP benefits are inadequate for many families, acknowledged flaws in the TFP and in how benefits are calculated, and outlined important recommendations to remedy and monitor this problem.

The report contains recommendations to address benefit adequacy issues, including: acknowledging and accounting for the cost-time trade-offs in obtaining a nutritious diet that currently make the SNAP allotment inadequate for most families; closing the gap created by the current 16 month period from the month used in the Thrifty Food Plan cost-of-living adjustment to the end of the period when benefits are based on that adjustment; revising the outdated assumption that households have 30 percent of their income to spend on food to reflect the actual current purchasing behaviors of U.S. households; adjusting the net income calculation to better reflect the ability of SNAP
participants to purchase food; and, taking into account the impact of limited food access on the ability of program participants to purchase a variety of affordable, healthy foods. The report also provides USDA with a number of recommendations focused on research, such as conducting research in the areas of nutrition education and resource management skills as well as food cost and availability.

**Supplemental Nutrition Assistance Program: Examining the Evidence to Define Benefit Adequacy.** Julie A. Caswell and Ann L. Yaktine, Editors; Committee on Examination of the Adequacy of Food Resources and SNAP Allotments; Food and Nutrition Board; Committee on National Statistics; Institute of Medicine and National Research Council. National Academies Press, 2013.

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**Effects of the Decline in the Real Value of SNAP Benefits From 2009 to 2011**

This research demonstrates the very positive impact of the 2009 SNAP benefits increase created by the American Recovery and Reinvestment Act (ARRA) and the harm caused by benefit reductions – in this instance in the form of inflation eroding SNAP food purchasing power without offsetting cost-of-living increases during the period of the study. An analysis of 2009-2011 food spending and food security Current Population Survey Food Security Supplemental data revealed that, as the value of SNAP benefits declined due to inflation in food prices after 2009, there was a significant increase (16.5 percent) in very low food security in SNAP households and a decrease (4.4 percent) in median food spending by SNAP households. Very low food security is a severe range of food insecurity characterized by reduced food intake and disrupted eating patterns.

This study is part of a series of Economic Research Service (ERS) reports focused on the impact of SNAP and the SNAP ARRA benefit boast on food insecurity. Earlier ERS research¹ documented the positive impact of the ARRA’s benefit boast on SNAP households’ food spending and food security from 2008 to 2009. This most recent study finds food inflation, which had cut the value of the ARRA increase by about half, was eroding those gains over time. The author concludes that, taken together, the two studies provide estimates of the effects that may be expected from potential future increases or decreases in SNAP benefits. ERS estimates that future increases in the maximum SNAP benefit of 10 percent would reduce the number of SNAP households with very low food security by about 22 percent, and reducing the maximum benefit by 10 percent would increase that number by about 29 percent.

For LINK: TWO References


Household Food Security in the United States in 2012

Household Food Security in the United States in 2012 reports on rates of household food security, and household spending on food, as well as the use of federal food and nutrition assistance programs by household food security status. Compared to 2011, household low and very low food security did not change in a meaningful manner (e.g., less than half a percent), but still remained well above levels in 2007, which was before the Great Recession. For example, in 2007, the overall household food insecurity rate was 11.1 percent, which was considerably lower than the 2012 rate of 14.5 percent. Similar to previous reports, demographic disparities remain based on: presence of children in the household; race/ethnicity; marital status; income; area of residence (e.g., urban versus rural); and census geographic regions.

The report also examined household spending on food and how it compared to the USDA’s Thrifty Food Plan (TFP). USDA posits that the TFP “serves as a national standard for a nutritious, minimal-cost diet (pg.23).” In 2012, the typical household spent about $50 per week, per person on food, which is about 16 percent more than the cost of the TFP; however, these rates changed based on demographic variables. For example, households that were below the federal poverty line spent about $35 per week per person, which was 9 percent less than the cost of the TFP, indicating they were not spending enough to meet the TFP standard for a basic diet. Similarly, food insecure households spent about $37.50 on food, which was 4 percent lower than the TFP, and 26 percent less than food-secure households.

Finally, the report examined the use of federal nutrition programs and household food security. The programs examined were the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the National School Lunch Program (NSLP). Overall, 59 percent of food- insecure households indicated they used at least one of the nutrition programs. Specifically, 42 percent of food-insecure households received SNAP, 32.5 received free or reduced lunch through the NSLP, and 11.4 percent received WIC in the previous 30 days.