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Nutrition, Food Security, and Obesity

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The dramatic reduction in welfare caseloads has been accompanied by surprisingly steep declines in participation in the Food Stamp Program (FSP). Because most families leaving welfare remain eligible for food stamps, many policymakers and program officials are questioning whether the safety net is working as intended. In the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), which eliminated the entitlement to Aid to Families with Dependent Children (AFDC) and converted cash assistance into a block grants to states, Congress clearly intended to maintain a safety net for food assistance and health insurance coverage. After deliberations concerning the role of the FSP and whether it should be folded into the Temporary Assistance for Needy Families (TANF) block grant, Congress left the FSP intact as an entitlement for low-income families, albeit not without imposing some limits on eligibility and benefits, as discussed in the next section.

This paper examines how welfare reform has affected the access of low-income families with children to food stamps, the largest source of food assistance and the only one substantially affected by welfare reform. The paper also takes a broader look at nutrition and hunger as they affect the well-being of children, including the troubling trends in obesity among adolescents in low-income families.

The first section of this chapter reviews measures of access to FSP benefits, focusing on how those benefits have changed under welfare reform and indicating several areas of policy concern. The second section looks at the federal government's effort to measure food security and hunger and explores the question of whether food insecurity and hunger have become more acute with welfare reform. Nutrition and related health outcomes as an important dimension of child well-being are discussed in the third section. The final section discusses the implications of these trends for policy and research priorities.

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Access to Food Stamps

Access to food stamps changed in two ways with welfare reform. First, PRWORA and subsequent legislation limited FSP eligibility for two types of households and reduced benefits modestly for all FSP households. The second change, and the one with the larger impact, is the indirect effect of the decline in TANF caseloads as a result of PRWORA on FSP participation.

Changes in food stamp program policy. Welfare reform legislation changed FSP eligibility and benefits in four ways:

- It limited eligibility for able-bodied adults without dependents (ABAWD) not working twenty hours/week.
- It disqualified most legal immigrants (elderly and disabled immigrants as well as children were later grandfathered in).
- It reduced benefits for all families by a modest amount.
- It provided for coordination of benefits with TANF sanctions. Previously, when states sanctioned TANF recipients for noncompliance with work requirements, the sanction would be partially offset by increases in food stamp benefits. This federal legislation allowed states to eliminate the offset and to sanction FSP benefits for individuals sanctioned under TANF.

Although these changes reduced the number of people receiving food stamps, as discussed below, they were not the major impetus for the sharp decline in the FSP rolls. In particular, they were not the leading factor in the large drop in the number of participating families with children.

Decline in food stamp participation under welfare reform. Between August 1995 and May 1999, the number of FSP participants declined sharply—by 8.0 million, or 31 percent.¹ This drop is largely the result of three factors: (1) PRWORA provisions that limited FSP eligibility for ABAWDs and legal immigrants; (2) families achieving employment success with earnings above the FSP eligibility threshold as a result of the booming economy and welfare reform; and (3) families who left or were diverted from TANF and who, despite their eligibility, did not participate in the FSP.

¹Estimated changes in FSP caseloads are based on administrative data on the number of individuals and households receiving food stamps during a month. From August 1995 to May 1999, the number of people receiving food stamps dropped from 25.99 to 17.96 million. The choice of August 1995 as the pre-reform point is somewhat arbitrary. States were then rapidly reforming their AFDC programs under waivers prior to the passage of PRWORA in late 1996.

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Perhaps 20 percent of the decline in the number of FSP participants, or 1.5 million people, can be attributed to the PRWORA policy changes limiting FSP eligibility for ABAWDs and legal immigrants.² Most of those losing eligibility as a result of those policy changes were not children, but the limits on legal immigrants did affect some families with children. Most of the other 80 percent of the decline occurred among households with children.³

The drop in the number of participants from 1995 to 1999 can also be attributed to the fact that some families lost eligibility because they moved from welfare to work, raising their family income above the eligibility threshold—that is the good news arising from a combination of welfare reform and the strong economy. We do not yet have good estimates, but that number might account for half of the remaining decline in participation.

Finally, eligible families leaving TANF participated in the FSP at a lower rate once they left TANF, despite the fact that they were still eligible for food stamps.⁴ Between August 1995 and February 1999, the number of AFDC/TANF recipients, largely in single-parent families, declined by 5.7 million, a 44 percent drop.⁵ The lower rates of participation among TANF leavers and among those diverted from TANF might account for roughly the other half of the remaining decline in participation.

²Characteristics of recipient households are based on information from a sample of cases collected each month to estimate payment error rates. The data on ABAWDs are from Laura Castner and Randy Rosso, *Characteristics of Food Stamp Households, Fiscal Year 1998* (Washington, D.C.: U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation, 2000), tables C6 and C8. From the August–September 1996 average of 1.01 million, the number dropped to 0.46 million by August–September 1998, a difference of 0.55 million. From the August–September 1996 average of 1.43 million, the number dropped to 0.32 million by August–September 1998, a gross difference of 1.11 million. However, we need to adjust for the increase in naturalized citizens of 0.151 million, for a net difference of 0.96 million. This calculation assumes, as an approximation, that all the change in these the two groups was a result of the legislated limits and not to the economy or other factors.

³Suzanne Smolkin and Robert Howard, *Characteristics of Food Stamp Households, Fiscal Year 1995* (U.S. Department of Agriculture, Food and Consumer Service, April 11, 1997), table B2. In 1995 there were 21.85 million participants in households with children compared with 16.07 million in 1998 for a decline of 5.78 million. The decline among all participants from FY 1995 to FY 1998 was 6.99 million. The 5.78 million decline plus the 1.5 million reduction in ABAWDs and aliens more than accounts for the total decline of 6.99 million, but the time period is slightly different and there is double counting since some aliens were children. See Laura Castner and Scott Cody, *Trends in FSP Participation Rates: Focus on September 1997*, draft report (Washington, D.C.: Mathematica Policy Research, Inc., 1999).

⁴Castner and Cody. On the basis of 1997 data, the number of eligible people in households with children fell by 1.24 million, from 19.50 million to 18.26 million. With a participation rate of 83 percent, the estimated rate for 1997 for this group, the change in the number of eligible people would account for 40 percent of the decline of 2.56 million in the number of participants in households with children.

⁵The number of TANF recipients fell from 13.10 million in August 1995 to 7.38 in February 1999.

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Most of the decline in participation happened among single-parent households with children. Among households with children, nearly two-thirds of the decline in participation occurred among single-parent households.⁶ The rate of decline was similar for single-parent and for other households with children.⁷ The reasons for the decline among the two types of households probably differ, however, with welfare reform being a key factor for single-parent families and the economy a more important factor for other households with children.

Among single-parent households, policy concern differs by vulnerability. The policy concern about the decline in FSP participation differs according to the vulnerability of three categories of single-parent households. The first category consists of families continuing to receive TANF benefits. Their link to the cash assistance system means that the traditional access from within the welfare system to Medicaid and food stamps is intact. Given these links, they will probably continue to participate in FSP and Medicaid under welfare reform at the same relatively high rates as they did before welfare reform. With welfare reform, however, the number of single-parent households continuing to receive both cash assistance and food stamp benefits has dropped sharply. Although cash assistance recipients still represent more than half of all single-parent FSP households, the proportion is declining. In addition, many more of the TANF-FSP households are working—the percentage of single-parent households with earnings has doubled since welfare reform.

The second group consists of low-income, working, single-parent families eligible for FSP benefits but not receiving TANF—welfare leavers, families diverted from TANF, and others. Because many of these families participated in the FSP before leaving TANF, many observers expected their participation in the FSP to hold steady at relatively high rates. However, studies of families leaving TANF show surprisingly low rates of participation in the FSP and lower-than-expected rates of participation in Medicaid.⁸ In fact, the rates of participation for those eligible for food stamps among this group will probably resemble those of the working

⁶Smolkin and Howard, table B2; Castner and Rosso, table B2.

⁷Single parents constituted 68 percent of all FSP households in both 1995 and 1998. See Smolkin and Howard, table C2; Castner and Rosso, table C2.

⁸See Sheila Zedlewski and Sarah Brauner, *Declines in Food Stamp and Welfare Participation: Is There a Connection?* (Washington, D.C.: Urban Institute, 1999). According to Zedlewski and Brauner, only 42 percent of former welfare recipients with an income level below the FSP eligibility line were participating in the program. FSP participation rates, defined as the proportion of FSP-eligible households actually receiving FSP benefits, are one measure of program access. Estimates of the number of eligible households are based on data from national surveys such as the current CPS, the Survey of Income and Program Participation (SIPP), and the National Survey of America's Families (NSAF) or on surveys of families who have left welfare. Estimates of the number of participants usually come from administrative data but may come directly from survey data.

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poor in the past.⁹ Whether this is an access problem and a policy issue of concern depends on the reasons for the low participation rate. If families know about their eligibility for food assistance, and the cost of applying for and receiving benefits is not unduly burdensome (including the need to take off work and other hassles), then current policies and program operations may be appropriate, and access may not be a problem. The fact that participation rates appear to vary widely by state, however, does give rise to concern that some states are offering greater access to food assistance than others.¹⁰

The third group of single-parent families who may be cause for concern consists of those who have left welfare but report little or no earnings. According to the Urban Institute's National Survey of America's Families (NSAF), about a quarter of the families leaving TANF do not have earnings, and about half of those without earnings report having no income.¹¹ This group makes up about 10 or 12 percent of all households leaving welfare. According to the NSAF, only about half of the families leaving welfare who have an income below 50 percent of the poverty rate participate in the FSP. The low rates of participation among what appear to be very vulnerable families with children—those with little or no earnings and an income of less than half of the poverty threshold—are a matter of substantial policy concern.

Later parts of this chapter discuss more fully what these program access concerns mean for research and policy priorities, but first we review some of the most relevant research on nutrition and hunger, which is also likely to factor into these priorities.

Nutrition

Nutrition and dietary factors are associated with poor nutrition in vulnerable groups, including children in low-income families, women of child-bearing age, and the elderly, as well as those with chronic health conditions. Poor diets, poor nutrition, and nutrition-related health conditions are especially prevalent among low-income families:¹²

⁹Single parents constituted 68 percent of all FSP households in both 1995 and 1998. See Smolkin and Howard, table C2; Castner and Rosso, table C2.

¹⁰Participation declines in the FSP for the two-year period between August 1996 and August 1998, for example, range from 5 percent in Nebraska to 48 percent in Vermont. Some portion of this difference might be explained by more households losing eligibility, but substantial differences remain.

¹¹Zedlewski and Brauner.

¹²Measures of diet quality, nutrition, and health status largely are based on the National Health and Nutrition Examination Survey and the Continuing Survey of Food Intakes by Individuals. NHANES is a representative sample of the U.S. noninstitutionalized population and consists of two components: (1) a household interview and (2) an interview and examination conducted in a mobile examination center. Both surveys collect detailed information on dietary intake, food security, and participation in food programs (Food Stamp Program; Women, Infants, and Children Program; National School Lunch

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- According to data from the National Health and Nutrition Examination Survey (NHANES), 12 percent of low-income children ages one to two, and 29 percent of low-income pregnant women are iron deficient.¹³ The nation had great success in reducing iron deficiency during the 1970s, but the rate has remained constant since then.
- According to data from the Continuing Survey of Food Intake for Individuals (CSFII) data, only 33 percent of people age two and older meet the dietary guidelines for percent of calories from fat.¹⁴
- According to NHANES data, 16 percent of low-income adolescents are overweight or obese.¹⁵ This rate is double that for higher-income adolescents.

Most Americans do not have a healthy diet, get enough exercise, or follow other guidelines for good health. However, the trend of rising levels of obesity and of being overweight, particularly the high rate for low-income adolescents, is a high priority problem with serious long-term consequences.

Food Security and Hunger

In 1995, the federal government launched a major effort to measure food security and hunger. Food security measures are based on a set of questions included annually in the Current Population Survey (CPS) since 1995 (a related set of food sufficiency questions was included in NHANES starting in 1988 and updated to the CPS questions in 1999). The measures from the CPS are based on the household respondent's perception about whether the household had adequate access to food or whether it did not have enough food as a result of a lack of money or other resources. Responses to the questions are used to assign each household to one of three categories: (1) food secure, (2) food insecure without hunger, and (3) food insecure with hunger.

The CPS-based food security measures show that approximately 30 percent of all low-income households (130 percent of the poverty level) have some degree of food insecurity, meaning that the household respondents perceived that they had some problems getting enough

Program; and National School Breakfast Program).

¹³U.S. Department of Health and Human Services, *Healthy People 2010, Vol. II*, conference edition (Washington, D.C.: U.S. Department of Health and Human Services, 2000).

¹⁴HHS chapter 19, page 14.

¹⁵Ibid.

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food. Roughly 12 percent of all low-income households fall into the more severe range, “food insecure with hunger.”¹⁶

These food security measures have been criticized because they are based on the perceptions of respondents and thus have an unclear relationship to more objective measures of nutrition or health status. Nevertheless, if welfare reform had a substantial effect on food security or hunger, these measures should be capable of discerning the impact. Between 1995 and 1998, no appreciable change occurred in these measures for low-income households or for households as a whole. This absence of change leads to the conclusion that at least by these measures, welfare reform has not significantly changed the hunger and food-insecurity status of low-income families.

Implications and Recommendations

This review of children’s well-being based on nutrition related outcomes, suggests that five areas are in urgent need of further research.

1. How highly vulnerable families are faring. With welfare reform and a strong economy, the nation has made great strides in moving families off welfare and into work, leading to greater self-sufficiency. Recognizing this substantial achievement, we now need to be concerned about how the most vulnerable families are faring.

Perhaps the vulnerable group of greatest concern is the families with children who report having little or no employment and very little income and who receive no cash assistance, or, in many cases, other safety net benefits such as food stamps. The national surveys raise concerns about this apparently vulnerable group, but they do not really answer the question about how they are coping. We need detailed case studies of a sample of these families to understand the extent to which their well-being—especially the well-being of their children—is threatened. The case studies would address the following questions:

- How are these families living with little or no reported income? Do they have unreported earnings or other income? Are they being supported by family, friends, or charity?
- Why are these families not working? What are their barriers to work? How severe are they?

¹⁶U.S. Department of Agriculture, Food and Nutrition Service, *Household Food Security in the United States 1995–1998*, in series: *Measuring Food Security in the United States* (Washington, D.C.: U.S. Department of Agriculture, 1999).

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- Why are these families not participating in the safety net programs such as food stamps? Do they think they are not eligible for benefits? Have they been sanctioned? Do they think the hassle is too great?

2. Why participation in safety net programs is higher in some states. Some states appear to be more successful than others at moving families *off* welfare while keeping those who remain eligible and in need of assistance *on* food stamps and Medicaid. Why are those states more successful? Is their success connected with messages that they convey to families and welfare offices, training of the workers, better support from their automated eligibility systems, or other factors? Work now underway should help answer these questions.¹⁷

3. Policy concern and data collection on all low-income families. Now that welfare reform has moved a large proportion of families off the rolls, and that welfare diversion policies are common, we should focus not on how welfare families are faring but on how low-income families in each state are faring. It no longer is useful to look at the former group because a large portion of it has left the rolls. It also is becoming not terribly useful to look at how welfare leavers are faring because many families are being diverted before they file a welfare application. Although the national surveys help tell us how low-income families are faring on average, the survey samples are generally too small to give us reliable, state-specific information. And because policies have become so diverse across states, we need to be able to measure the well-being of low-income families at the state level under a given state's particular set of policies. Doing so could mean incorporating state-level estimates for large states within national surveys or conducting separate state surveys.

4. How food insecurity measures relate to more direct measures of well-being. It is important to study how the relatively new measures of food insecurity relate to more direct measures of well-being, such as diet quality, nutritional status, and health. Early research has raised questions about the relationship between measures of food insecurity and measures of diet and nutrient intake. Similarly, we need to know more about how measured food insecurity is related to health outcomes. Findings are just starting to emerge from research based on NHANES III, which contains a set of questions related to food security as well as information on nutrition and health status.¹⁸ Finally, we need to know more about what is going on in

¹⁷A Mathematica Policy Research, Inc., study directed by LaDonna Pavetti and sponsored by the U.S. Department of Health and Human Services and the Robert Wood Johnson Foundation is looking at these issues.

¹⁸See, for example, Ronald E. Kleinman, J. Michael Murphy, Michelle Little, Maria Pagano, Cheryl A. Wehler, Kenneth Regal, and Michael S. Jellinek, "Hunger in Children in the United States: Potential Behavioral and Emotional Correlates," *Pediatrics* 101 (1998): 1–6; Christine M. Olsen, "Nutrition and Health Outcomes Associated with Food Insecurity and Hunger," *Journal of Nutrition* 129 (1999): 521S–524S; Katherine Alaimo, Ronette R. Briefel, Edward A. Frongillo, and Catherine M. Olsen, "Food Insecurity Exists in the United States: Results from the Third National Health and Nutrition

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households reporting more severe levels of food insufficiency, how they are coping, and the degree of the threat to the well-being of the children in these households. For example, in households receiving food stamps who report being “food insecure with hunger,” is the hunger the result of food stamps being exhausted before the next month’s allotment is available?

5. Overweight and obesity. As mentioned earlier, most Americans do not have a healthy diet, get enough exercise, or follow other guidelines for good health. The rising levels in being overweight and in obesity, particularly among low-income adolescents, is a high-priority problem with serious long-term consequences. They lead to higher such as higher rates of diabetes, high blood pressure, and other health problems. Dietary and health habits begun in childhood can have a strong positive or negative effect on later health.

More attention needs to be given to improving dietary and health behaviors in children and adolescents. How this goal can be accomplished and the role the FSP, the schools, and other institutions will play in accomplishing are important questions.

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Comments

*David Murray**

My organization principally concerns itself with the intersection of research policy decisions and how the research is conveyed in the media. In the arena of hunger, food security, and nutrition, it has been frustrating, because anyone who spends a little time examining the methodology will quickly recognize a general misperception regarding the problems of American children, particularly with regard to hunger. To a large extent, alarming claims regarding a problem that does not exist have prevented us from clearly understanding the real story in childhood outcomes. When it comes to actual nutrition issues, we have witnessed a prime example of a case of “the boy who cries wolf” that has served to obscure the facts on the subject.

According to the activist group Bread for the World, a U.S. Department of Agriculture (USDA) study shows that “31 million Americans . . . still face hunger as a regular fact of life.”¹ Their numbers echo a study released January 20, 2000, from the Tufts University Center on Hunger and Poverty, which claimed that “nearly one in six children lives in a household where . . . families face a harsh choice: heat the home or feed the children.”² But what is the true scope of this problem? Though media confidently quoted the hunger numbers, a closer look reveals that the evidence is deeply flawed.

I want to review the difficulties that have interfered with our capacity to understand the genuine problem of inadequate diet for American children. Let us examine the January 1999 statement of the American Dietetic Association (ADA) about the health status of U.S. children. As it turns out, lack of food may not be the most serious problem faced.

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¹David Briscoe, “Study: 1 in 10 U.S. Households Going Hungry,” Associated Press, February 10, 2000.

²Tufts University Center on Hunger and Poverty, *Paradox of Our Times: Hunger in a Strong Economy* (Tufts University: Boston, Mass., January 20, 2000).

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According to the ADA, over the past three decades, children's health generally has improved, as evidenced by lower rates of infant mortality and major diseases.³ During the past decade, however, the number of children who are overweight has more than doubled.

Approximately 11 percent of American children are overweight. An additional 14 percent have a body mass index between the 85th and 95th percentiles, which puts them at increased risk for becoming overweight and experiencing a variety of serious health problems.

In the face of this increase, dietary guidance for U.S. children has broadened from the earlier focus on issues of nutrient underconsumption and deficiency to include patterns related to nutrient overconsumption, physical activity, and attainment of optimal health. Yet if overconsumption is the most immediate threat, why have we become focused on its opposite? A large part of the answer comes from the kinds of questions asked in surveys of American well-being.

The most comprehensive analysis of hunger in America comes from the USDA, which recently reported that about 9.7 percent of all American children are hungry. The numbers were higher in certain states, such as Arkansas, where 12.6 percent were hungry. In New Mexico, ranked first in the nation, 15.1 percent were hungry between the study years 1996 and 1998. As the stock market boomed, few people were prepared for such news, especially when the USDA currently offers twenty-six food programs with a budget of \$35 billion.

Just how serious is the situation? As Health and Human Services Undersecretary Fernando Torres-Gil said, "We are literally talking about people's lives, whether they will become sick and die because of malnutrition and poor health all because they couldn't get at least one meal. . . . This is a life and death matter."⁴ But does anyone actually measure food intake and malnutrition? In fact, malnutrition and related diseases are not even addressed in the USDA survey.

So what was asked? The most recent data from the Food and Nutrition Survey were based on interviews with 44,730 households. The survey examined their experience of food insecurity. About half the households reporting that they experienced some sort of hunger, defined as "food insecurity," were also receiving some form of public benefit assistance in the month prior to the interview. The data indicate that no relationship necessarily exists between one's status in a public benefit program and being food insecure. That is, hunger may be an issue for those no longer served by benefit programs, but it appears that a substantial proportion of those facing this issue are already covered by some sort of program.

³American Dietetic Association, "Position of the American Dietetic Association: Dietary Guidance for Healthy Children Aged 2 to 11 Years," *Journal of the American Dietetic Association* 99 (1) (1999): 93.

⁴L. Brent Bozell, III, "Misguided Purveyors of Fear," *Washington Times*, December 28, 1994.

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According to the survey, in 1995, a year marked by good economic news, hunger existed in 4.1 percent of all U.S. households, or 4.2 million households. The portrait of hunger that emerges from the survey has been relatively consistent over time, largely independent of economic fluctuations. The households were counted as “hungry” because they contained one or more persons who reported “experiencing reduced food intake” at some point, and the reduced intake was said to be because of “a lack of financial resources.”

But not all of these data refer to children, because any adult in the household meeting these criteria could trigger counting that household as “hungry.” Approximately 330,000 of those experiencing reduced food intake were estimated to be children. The presence of children in the household was correlated with the likelihood that the household would be classified as experiencing hunger. Furthermore, households experiencing hunger were disproportionately either black or Hispanic.

A more dire category of hunger than just “experiencing reduced food intake” was also identified: “severe hunger.” Approximately 20 percent of “hungry” households fell into the category of “severe hunger” on the basis of the status of one or more household member, producing an estimate of approximately 817,000 such households.

But “hunger” and “severe hunger” and terms such as “experiencing reduced food intake” are not the only terms used in the survey instruments, and different numbers of households felt to be “hungry” are produced when other terms are used to classify them. For instance, about 7.8 percent of U.S. households were characterized as being “food insecure with no hunger evident.” Slightly more than 4 percent of U.S. households were categorized as “food insecure with hunger evident.” Correspondingly, 88 percent of U.S. households were labeled “food secure.”

Again, the picture for children is slightly different. Nearly 38,000 households with children under age eighteen were classified as “food insecure,” of which 12 percent were “food insecure without hunger,” as opposed to 5 percent who were “food insecure with hunger evident.” Marital status was a factor of great consequence in determining the likelihood that a child would be “food secure” or “food insecure.” Of married-couple households with children under age eighteen, only 8 percent reported “food insecurity without hunger.” An even smaller number, 2.8 percent, fell into the category “food insecure with hunger evident.” But when one turns to female heads of household with children under eighteen, the numbers experiencing hunger swell. Nearly 23 percent of such households report “food insecurity with no hunger present,” whereas a full 12 percent reported “food insecure with hunger evident.”

But what do these categories of “insecurity” really mean in behavioral terms? It should be readily apparent that this whole arena of social science is profoundly troubled by a variety of measurement difficulties. The biggest difficulty lies in definitions. The term “hunger” cannot be given an objective characterization. It is defined in a variety of ways, not all of which are constant across the different surveys. The effort to define hunger as “food insecurity” or “food security” is relatively recent. Depending on the questions, a survey can magnify the appearance

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of real need by confusing it with “food insecurity,” a subjective perception. The Radimer/Cornell hunger scale, for example, defines hunger as “the inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.” Research using that definition found that in New York state in 1993, an astonishing 47 percent of women surveyed were “hungry.”

The USDA study used a similar methodology, whereby interviewers asked respondents as many as eighteen questions to pinpoint the level of food availability within a family. According to Mark Nord, a USDA sociologist and author of the study, some families often experience “mild food insecurity.”⁵ Yet this response was counted as “hunger.” Food activists readily admit the difference: “There are not many children in America with swollen bellies anymore from malnutrition like you might have seen fifty years ago and you still see in parts of the developing world,” the Food Research and Action Center (FRAC) told the press.⁶

When the USDA queried “insecurity” about food, they were measuring the percentage of households that reported “difficulty getting enough nutritious, safe food at all times, in a socially acceptable way.” If a household adult answered yes to any one of the questions, the children of that household were counted “hungry.” No one measured nutrient intake or actual children. Severe hunger was defined as “the uneasy or painful sensation caused by a lack of food and recurrent, involuntary lack of access to food.” But “lack of access” is not necessarily the same thing as “no food,” and having an “uneasy” sensation is sufficiently nebulous that food “wants” may substitute for genuine food “needs.”

Understanding the true scope of hunger is further complicated by the role of the media. A constant ratcheting up of the view of hunger occurs in the public imagination and in the policy community whenever the nightly news turns its attention to the issue. When a survey claimed that there were 12 million hungry children at some time in 1991, Tom Brokaw of the NBC Nightly News (June 16, 1993) quickly transformed that claim into “12 million American children are malnourished.” His reporting was at least better than the earlier claim of Dan Rather on the CBS Evening News (March 26, 1991), who announced “a startling number of American children in danger of starvation.”

Even if we were to grant some form of definitional adequacy here, the term “food insecurity” itself has been deployed in several ways. According to the Urban Institute, food insecurity refers to people who never show long-term physical signs of malnutrition yet experience the physical and emotional stresses of hunger. The idea behind this definition is to go beyond restrictive medical definitions of malnutrition to the social definition of hunger, even if the shortage is not prolonged enough to cause health problems.

⁵Rene Romo, “Under the Shadow of Hunger,” *Albuquerque Journal*, December 26, 1999.

⁶Michelle Kurtz, “Not Just Numbers,” *Austin American Statesman*, December 24, 1999.

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According to an April 1998 article from the American Dietetic Association, measurement of hunger now focuses on “food security,” which is defined as having, at a minimum, ready access to nutritionally adequate and safe foods acquired in socially acceptable ways.⁷ Any household lacking such security, one presumes, could be termed “hungry” or at least, “at risk of hunger.”

Unlike previous definitions of hunger, definitions of food security embrace a wide degree of need, from people who are in physiological pain and suffering from malnutrition, such as a person with AIDS whose illness makes it difficult to buy and prepare food, to those who are anxious about getting enough to eat, such as single parents struggling to feed a family on a minimum-wage job. They all may experience food security problems.

Clearly, this whole area is plagued by a variety of difficulties. Even if we grant the definitions, the surveys to date have been methodologically weak and have used a variety of inadequate models of what might cause the underlying dilemmas. The actual danger is that the causes of real hunger will be obscured. Though the media never attended to it, buried in the USDA report was the fact that female-headed households were many times more likely to experience hunger than husband-wife households. Only 11 percent of married-couple families were “food insecure,” as opposed to 35 percent of female-headed households with no spouse. A recent Urban Institute report showed that the major group reporting “severe difficulties affording food” were current food stamp recipients with incomes above 130 percent of the poverty level. These data suggest that difficulties for children are not all caused by an absence of resources. Nearly 30 percent of eligible children not getting federal school meals report the reason as “not getting to school on time.”

The lesson is that social programs designed to alleviate the condition of children cannot simply stop with the provision of resources. They must address underlying circumstances of children’s home life, including issues of household management and adult priorities.

Finally, a truly compassionate concern for children and the social conditions that contribute to their plight must be based on meaningful evidence. To date, “hunger” surveys have proved to be inadequate to the task.

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Comments

*Richard Bavier**

As results from the food security questions on surveys become available and are used to educate the public and policymakers, they will be subject to a kind and level of scrutiny different from the vigorous differences of opinion among experts that characterized the developmental process. In fact, the more effectively the data are used, the more critical scrutiny they will receive.

I am going to suggest a couple of areas in which outside scrutiny may eventually be focused. I may be suited for this task as someone who has not been involved in the development of the current food security measure, but who, as a staff employee at the Office of Management and Budget, has asked skeptical questions about proposals to add food security questions to several national surveys.

In the CPS data reported in *Household Food Insecurity in United States in 1995*, 38 percent of the households that were classified as “food insecure with moderate hunger” answered “no” every time they were asked a direct question about hunger. All household respondents were asked Question 35: “In the last twelve months, since May 1994, were you ever hungry but didn’t eat because you couldn’t afford enough food?” In addition, households with children were asked Question 47: “In the last twelve months, (was CHILD’S NAME/were the children) ever hungry but you just couldn’t afford more food?”

Moreover, only about 38 percent of the households with “moderate hunger” on the twelve-month scale had calendar year 1994 pretax incomes below the poverty line. Fewer than half (46 percent) of the households with “severe hunger” were poor in 1994. What’s more, more than one-third of the “moderate hunger” household and more than one-fourth of the “severe hunger” households had money incomes above 185 percent of their poverty lines, meaning that they were not even in the poorest third of all households. Around 15 percent of the “moderate hunger” households and around 10 percent of the “severe hunger” households seemed to have 1994 incomes above the median for all households!

A year is a long time, and episodes of hunger may have occurred while a household’s income was low, even though the household’s annual income was not low. We don’t have the results from the food security questions on the Survey of Income and Program Participation

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(SIPP), which provides monthly data. Food sufficiency questions were asked on Wave 3 of the 1992 SIPP panel and on Wave 9 of the 1993 panel; one question, for example, asked whether households had insufficient food in each of the four preceding months.

In both panels, only half of households reporting food insufficiency in a month had pre-tax money income below the poverty line in the same month. Less than one-third were between the poverty line and 185 percent of the poverty line. Seventeen percent in the 1992 panel and 24 percent in the 1993 panel had incomes above 185 percent of poverty, meaning that they were not in the poorest third of all households; moreover, 6 to 8 percent were actually above 300 percent of poverty, which is around the median U.S. household income.

Critics of the food security measure are likely to focus on this sort of data and argue that many of the households classified as hungry by *Household Food Insecurity in United States in 1995* because they cannot afford food either deny being hungry or do not look like they cannot afford food. In response, defenders of the food security measures will argue that you should not pay too much attention to answers to individual questions. The Summary Report states that “it is important to bear in mind that households are classified on the basis of their overall pattern of responses to the entire sequence of questions making up the measurement scale. No single question, no single condition is used to classify households.”¹

This logic is drawn from item response theory developed in the fields of educational and psychological testing. The total number of conforming answers is all that matters, not the answer to individual questions. The problem that defenders of the current food security measure will run into is that their critics will cite types of evidence that item response theory is not designed to handle. Item response theory—of which the Rasch model employed with the food security questions is an application—is designed to measure latent traits, such as intelligence or personality. It is reasonable to assume that we all have such traits to one degree or another, although they cannot be observed directly. So education and psychological tests are measuring how much of the trait is present—its intensity. A wrong answer on an aptitude test or a negative answer on a personality test only fails to add to the measured intensity of the trait. According to this logic, “no” doesn’t count.

Hunger is neither a trait nor latent, however. It is an experience or sensation with observable physiological etiology. Neither of the two unifying phenomena that underlie the food security concept—increasingly severe disruption of normal food intake and increasingly severe economic distress—are latent traits. Hunger, disrupted food intake, and economic stress may look like good candidates for the application of item response theory because they all present

¹United States Department of Agriculture, *Household Food Security in the United States in 1995, Summary Report of the Food Security Measurement Project* (Washington, D.C.: United States Department of Agriculture, 1997A), 36.

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themselves in various degrees of intensity but with no clear boundaries. However, none are traits that everyone has to one degree or another, and none are latent. They are all directly observable.

We could observe disruption of normal food intake directly if survey field staff somehow were present at all meals eaten by sample households. Instead, we ask respondents to make the direct observations for us. Moreover, although gross income and the official poverty thresholds may not be the right measure for the ability to afford food, in theory we could have sufficiently direct observation to know for certain whether a family with a disruption of normal food intake could or could not *afford* to buy food.

Even hunger is directly observable. We should not confuse the subjective nature of hunger with the unobservable nature of a latent trait, such as intelligence. We can observe hunger directly when it is our own. In fact, the food security battery asks respondents for reports on their own direct experience of hunger.

Consequently, invoking the elegance of Rasch analysis probably will be useful only as a delaying tactic against criticism that the number of hungry households was inflated by including households that did not report hunger. Critics will cite direct evidence of the absence of the phenomenon of interest: hunger. Rasch models do not weigh such evidence. Instead, a dispute over the prevalence of hunger will eventually turn on more familiar scientific rules of evidence. Do responses to several other questions about behavior that is (in the words of the Technical Report) “consistent with” the presence of hunger in a household outweigh direct reports of the absence of hunger?²

My own view is that reports of not eating balanced meals and skipping or eating reduced portions in as few as three meals over the course of a year do not seem to make a strong case that “moderate hunger” was present in a household that denied hunger. My message, at last a positive one, I think, is that these points argue for rethinking so much reliance on item response theory to justify food security measures. A measure of the prevalence of hunger that will stand up to scrutiny and be understood by the general public and policymakers will need to be based on questions that do a better job of discriminating frequency, intensity, and duration of disrupted food intake and hunger. That measure would seem to require more questions in the food-security battery rather than reliance on a small subset of questions shown to produce reliable scale scores.

Let me try to reinforce this theme when it comes to the economic well-being of food insecure households. I mentioned two unifying phenomena underlying the food security concept. One is increasingly severe disruption of normal food intake, and the other is increasingly severe economic distress. The two underlying phenomena are related as cause and effect. We are

²United States Department of Agriculture, *Household Food Security in the United States in 1995, Technical Report of the Food Security Measurement Project* (Washington, D.C.: United States Department of Agriculture, 1997B), 54–55.

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interested in cases of the disruption of food intake insofar as they are caused by economic distress, and not, for example, by discretionary dieting.

Logically, if a household is food insecure, then it must be experiencing economic distress. If we can observe directly that the cause is not present, no scale score, however high, will demonstrate the presence of the effect. High income in a household classified as food insecure again represents a kind of evidence not contemplated in item response theory—strong evidence of the absence of the phenomenon of interest. The difference, compared with reports of the absence of hunger, is that in the case of economic distress, the negative evidence comes from questions not included in the scaling process.

So my other positive suggestion is that we need to establish a closer empirical link between food insecurity and what is, by definition, its cause. Although researchers attempting to validate the food security and food sufficiency measures typically declare victory if they can show that poverty rates of households with food insecurity or insufficiency are significantly higher, or incomes are significantly lower, than for food secure and sufficient households, I think we would all agree that this is a pretty weak test in this context. First, it is weak because this kind of test validates any construct consistent with degrees of economic distress. Second, such validation is weak because we have good reasons to expect a much stronger correlation. Estimates of the prevalence of hunger are especially powerful because the public associates hunger with an especially severe level of poverty. If a household is experiencing chronic hunger, we assume that all discretionary spending has been eliminated and that even spending on other necessities may have been cut back. If many households reporting food insufficiency or classified as food insecure with hunger do not appear to be very poor, the possibility that we are not measuring what we want people to think we are measuring, or at least that we are not measuring it very well, has to be considered.

Maybe a stronger empirical link between responses to food security questions and economic distress can be forged by showing that responses to the current questions are closely correlated with more sensitive resource measures, such as those that reflect spending on other needs. Or maybe questions that do a better job of discriminating more severe levels of intensity, frequency, and duration of reduced food intake and hunger will also do a better job at discriminating cases of hunger that are caused by insufficient resources.

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Discussion

Richard Bavier: I looked at the food security measure a little for a conference that USDA held in February, and I want to underscore what David has been saying. The April 1995 CPS was the first one that had the food security battery in its current form. Thirty-eight percent of the respondents in families subsequently classified by USDA as “food insecure with moderate hunger” answered no every time they were asked directly whether they or their children had experienced hunger. All respondents were asked whether they had personally experienced hunger at any time in the past twelve months. If there were children in the family, the respondent also was asked if any of the children had experienced hunger. Thirty-eight percent of the time, the people who were classified as food insecure with moderate hunger answered in the negative to both questions. Only about the same proportion of those classified as food insecure were poor.

Peter H. Rossi: In fact, recipients have a higher level of food insecurity than nonrecipients, and apparently that holds other things constant. The other mystery that we also ought to consider, as Robert Rector said, is that it is inconceivable that a family can live on zero income for any period of time. So there must be something wrong with our understanding of how people eat and survive, or there must be something wrong with our measuring. It is a serious problem; we have to get rid of this inconsistency with known science and fact and experience. But it is also the case with the food insecurity measure—it, too, is an inconsistency that has to be ironed out before one can take seriously a food security measurement.

Harold S. Beebout: First, on the food security measure, I—as well as the general policy community—do not know exactly what we should do with that at this point. I said we needed research to better identify how food security and insecurity correlate with things we care about. That is a priority.

Nevertheless, measures like this are often reasonably reliable for showing change, even if they’re not terribly good at measuring the level. So I still think that the finding of no change is valid. And we absolutely need to know more about why we have this apparent lack of correlation between the amount of food assistance people are getting and their status on the measure. For example, at 130 percent of the poverty line, those receiving food stamps are more likely to report food insecurity than those not receiving them.

Unidentified participant: According to the Urban Institute, working families who had very low incomes were never as likely as food stamp recipients to report food insecurity, and it may be that as they entered the category of working poor, they adopt a slightly different ethos about change, dignity, and the social deployment of food stamps. Who knows?

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David Murray: And they may get their income in a different flow. You get your food stamps early in the month, and maybe you do perceive yourself as being hungry at the end of the month when the food stamps have run out.

Harold S. Beebout: I agree with you, David, in the sense that this is where we need more research to sort out what is going on.

Robert Greenstein: I think the comments are very well taken. I've been disturbed at the rush to embrace this food insecurity measure. It's a crude measure. The key point that has been mentioned is that it is a self-perception measure. It's not clear what it means. It's not clear that it could pick up changes, other than dramatic changes.

First, we know from the research that most food stamp benefit dollars do not provide incremental food purchasing but income supplementation. Also, the past three years have been a period in which earnings and employment have increased dramatically in the lower part of the population and in which food stamp use has decreased. Given all the flaws in this measure, it is not surprising that you can't tell much of anything from it. I'm an old-fashioned type who still thinks that the better measures were the ones we used to have from the National Household Food Consumption Surveys, which told us what percentage of households below certain income levels failed to get 70 percent, 80 percent of the Recommended Daily Allowances (RDAs)—the 100 percent figure is a little high.

The first research issue here is that we have not had high-quality data on that question from Food Consumption Surveys since 1979–1980. The Food Consumption Survey of the late 1980s was messed up, and the data from it were pretty worthless. I'm not sure what has happened since then. But I'd rather see us go back to getting that kind of hard data from the Food Consumption Survey than the softer measure.

Another issue is that sometimes people look at averages. So if you look at averages, the low-income population, on average, appears to be getting more than 100 percent of the RDAs, but most nutrition researchers say the more important questions are, What percentage are getting less than 70 or 80 percent of the RDAs? Has that changed over time? We do not have good data for the past twenty years on that.

The second research issue is the idea that it looks like the welfare leavers have a participation rate similar to what the working poor had before. Given that these welfare leavers were on food stamps when they were on welfare and are familiar with the welfare office, do they have less stigma about food stamps than working people and poor people who never were on food stamps? What we would really like to know is whether their participation rate in food stamps is the same or lower than the rate among welfare leavers five or ten years ago. I think that is the more relevant research question. I'm not aware of any data on it, and I don't know whether anyone is studying it.

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From Harold Beebout's Mathematica data and other sources, we know that participation rates in food stamps generally rose substantially from 1989 through about 1993 or 1994. Much of that increase was an increase in the participation rate among working poor families with children. It looks like that rate is now declining, but again, we need more research.

A final point comes from the work that we were doing. In three other areas, something major is going on, but we need research. This is suggestive, not definitive.

Robert Rector: I have written about this subject in the piece called "The Extent of Material Hardship and Poverty."¹ If you look at this issue over the past forty years, we started with a concern about undernutrition and malnutrition. As those problems became increasingly difficult to find (for example, it is almost impossible to find any protein or other nutrient deficiency anywhere in the U.S. population, irrespective of income), we then moved on to the less serious problem of hunger, which is a temporary food shortage that is not necessarily or not even generally linked to any kind of undernutrition.

The hunger numbers then were not looking as sensational. The typical question surveys would ask was, "Did your family have enough food to eat over the past three months?" Very consistently, some 97 percent of the public said, "Yes, we did." Eighty-five percent of the poor said, "Yes, we did."

We couldn't get large hunger numbers, so we had to move to an even more nebulous construct, which is food insecurity without hunger. This is very much a propaganda instrument in search of a PR story on the nightly news, and even at the agriculture department, they recognize that.

I would put more credibility into the lower level questions on the food insecurity survey, the ones that actually measure food insecurity with hunger, which is a much smaller population. There are some interesting concrete questions in there, such as "At any time in the prior month, did your child miss an entire meal because there wasn't enough food in the house to eat?" The answer to that is consistently about 1 child in 200.

The problem for the advocacy community is that 1 in 200 is not a good number. They need a much larger number if they are going to go out and generate front-page stories and things like that, which is why they add food insecurity without hunger on top of the food-insecurity-with-hunger construct.

The reality is, if you look at the data for the past twenty years, since the mid-1970s the principal nutrition-related problems relating to poor people involve the overconsumption of

¹Robert E. Rector, Kirk A. Johnson, and Sarah E. Youssef, "The Extent of Material Hardship in the United States," *Review of Social Economy* 42 (3) (1999): 351–387.

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food, principally the overconsumption of calories, fat, and salt. Poor adult women in particular are much more likely to be overweight.

A fascinating study came out a year ago from the WIC (Women, Infants, and Children) food program, where WIC was demonstrating that it is not responsible for the alarming growth in obesity among poor children. Any time you have WIC claiming that it is not responsible for obesity, you can reasonably conclude that the hunger crisis in the United States is just a tad bit overstated.

The reality is, if you look at the actual data, income or poverty status has little effect on nutriment intake. In fact, the two key variables, if you want to try to measure what nutriments people are taking in, are age and gender. For example, take a typical poor boy who is age nine and ask, looking at twenty different variables, what profile does his nutriment intake most resemble? Is it that of a poor girl, age nine? No, it's that of an upper middle-class boy, age nine. Similarly, a poor woman's nutriment intake most closely resembles that of an upper middle-class woman.

The reality is that age and gender are overwhelmingly determinative of nutriment intake. Income is of marginal significance. Particularly among children and particularly among children under age twelve, where the parent has more control over what is being eaten, the nutriment intakes of poor children are high, on average.

As a result, if you look at poor boys age eighteen and nineteen, where we can make a comparison with previous historical periods, they are on average, one inch taller and ten pounds heavier than a boy of a similar age in the general population in the United States in the late 1950s, based on draft data from back then. They are about two inches taller and some twenty to twenty-five pounds heavier than the doughboys who fought in World War I. You don't get there if you are chronically short of food.

This is yet another case in which we are going to spend a lot of time as a society talking about problems that essentially don't exist—almost, it seems, as a way of avoiding talking about the serious problems that really do exist.

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