

# Measuring Children's Food Security in U.S. Households, 1995-99

Mark Nord and Gary Bickel

## Introduction

An important objective of public policy in the United States for more than 50 years has been to reduce, and ultimately to eliminate, childhood hunger in America. Food sufficiency and diet quality have long been recognized as vital for children's health, development, and general well-being. Beginning with the National School Lunch Program in 1946, several of the major Federal food assistance programs have been aimed specifically at assuring adequate nutrition for children. The capacity to accurately measure the food security status of children in household surveys and to identify the occurrence of resource-constrained hunger among children is an essential tool for monitoring the prevalence of children's hunger and for assessing programs designed to address it. Developing appropriate methods to meet this need has been a prime objective of the Federal interagency food security measurement project in recent years.<sup>1</sup>

The Federal Government has measured and reported the extent and severity of food insecurity and hunger in U.S. households annually since 1995, including estimates of the number of children in food-insecure households and in households with one or more members going hungry at times because of lack of money for food. However, the total number of children in all households with hunger substantially overstates the number of *children* experiencing hunger. In most such

households, only adult members go hungry, while the children—especially young children—are shielded by adults from that more severe level of food deprivation (Hamilton et al., 1997a).

On the other hand, the initial effort made to identify households in which children had been hungry by means of a more severe category of the household scale had the opposite bias, i.e., it *understated* the number of households with hunger among children. Hamilton et al. (1997a; 1997b), in the initial development of the household-level food security measure, specified a “severe hunger” category that was intended primarily to identify households with hunger among children. This effort to find such a proxy measure for children's hunger was consistent with the objective of the project at that time to develop a single, unified, household-level measure of severity. A substantial body of earlier research had found that, in the United States, children are generally shielded from hunger at less severe levels of household deprivation, including some level of hunger among adults. Typically, children begin to experience hunger only when hunger among adults in the household reaches more severe levels, e.g., when adults go whole days without eating. The household-level data from the Current Population Survey (CPS) Food Security Survey strongly confirmed these earlier findings, lending support to the idea that a “severe hunger” category of the general household measure could provide an acceptable proxy for households with children's hunger.<sup>2</sup> However, further examination showed that not all households with children conform to the modal pattern of not reporting hunger among

---

<sup>1</sup> The Federal interagency food security measurement project was organized in response to the National Nutrition Monitoring and Related Research Act of 1990, and the Ten-Year Plan developed under the Act. The project, under the leadership of USDA and DHHS, was assigned the task of developing “a standardized mechanism and instrument(s) for defining and obtaining data on the prevalence of ‘food insecurity’ or ‘food insufficiency’ in the U.S. and methodologies that can be used across the [National Nutrition Monitoring] Program and at State and local levels.” For further information on the project, see Hamilton et al. (1997a) and Carlson, Andrews, and Bickel (1999).

---

<sup>2</sup> The CPS Food Security Survey is fielded annually as the Food Security Supplement to the Census Bureau's regular Current Population Survey (CPS). USDA sponsors collection of the Food Security Supplement while the Bureau of Labor Statistics sponsors the monthly labor-force core of the CPS. The shorter “CPS Food Security Survey” designation is used throughout this report for ease of communication.

children until adult hunger in the household reaches a severe level (such as adults going a whole day without eating). Evidence of children's hunger is reported in a substantial number of households that have only moderate hunger among adults. It became apparent, therefore, that the prevalence of children's hunger is understated by the prevalence of "severe hunger" as measured at the household level (Carlson et al., 1999).

To address this concern and to achieve valid estimates of the prevalence of hunger among children, a new children's food security scale has been developed, building on 5 years of analysis of CPS Food Security Survey data.<sup>3</sup> This children's food security scale is calculated from eight survey items that ask specifically about food-related experiences and conditions of children in the household. The scale's purpose is to measure the food security status of children and, specifically, to identify households in which one or more children have been hungry at times during the year because there was not enough money for food in the household.

The 8 child-referenced items are a subset of the 18 survey items on which the household food security scale is based (see appendix A for the full food security survey module). Like the household- and adult-referenced items in the scale, the child-referenced items ask about food deprivation experiences and conditions across a wide range of severity. For example, the least severe child-referenced item is:

*"We relied on only a few kinds of low-cost food to feed the children because we were running out of money to buy food." Was that often, sometimes, or never true for you in the last 12 months?*

An item at midrange is:

*In the last 12 months, did you ever cut the size of the children's meals because there wasn't enough money for food?*

And the most severe item is:

---

<sup>3</sup> This children's food security scale was initially described in Nord and Bickel, 1999.

*In the last 12 months, did any of the children ever not eat for a whole day because there wasn't enough money for food?*

Households that affirmed five or more of the eight child-referenced items are classified as having hunger among children. Typically, a household just past the threshold of this severity range will have affirmed all of the following:

1. They relied on only a few kinds of low-cost food to feed the children because they were running out of money to buy food;
2. They couldn't afford to feed the children balanced meals;
3. The children were not eating enough because the household just couldn't afford enough food;
4. They cut the size of children's meals because there wasn't enough money for food;
5. The children were hungry but they just couldn't afford more food.

All of the items in the scale are presented and discussed in detail in chapter 2.

Two aspects of the scale should be kept in mind when interpreting the prevalence rates in this report. First, although this new measure is child-specific, it is still a household-level scale. That is, it identifies *households* with hunger among children. More precisely, it identifies households in which *at least one* child (age 0-17) has been hungry at times during the year because of constrained household resources. This does not mean that all children in the household necessarily were hungry. Research described in later chapters shows that younger children are protected from hunger and reduced food intake at much more severe levels of adult deprivation than are older children. The CPS Food Security Survey does not ask about the experience of each child separately, but only about whether *any* child in the household experienced the various forms of food deprivation. Thus, when a household with several children of varying age affirms items evidencing children's hunger, this may mean that all the children were hungry at times because of constrained household resources, or it may mean that an older child was hungry while younger children were shielded from hunger.

Thus, the number of children living in households with children's hunger provides an upper-bound estimate of the actual number of hungry children in the Nation. A lower-bound estimate is provided by the number of households with hungry children, since at least one child in each of these households has been hungry because of a lack of money for food. The substantial difference between these upper- and lower-bound estimates are inherent in the CPS Food Security Survey design. Thus, while the statistics presented in this report are the most reliable currently available, they do not provide a highly precise answer to the question, "How many hungry children are there in the Nation?"

The second aspect of the scale that should be kept in mind is that it describes experiences and conditions over the entire 12-month period preceding the survey. Nationally, children in 219,000 U.S. households were hungry at times during the year that ended in April 1999 because of the households' food insecurity. This does not mean that these households were unable to provide enough food for the children every day, or even every month.

Research reported elsewhere suggests that the number of households with hunger among children some time during an average month is about 60 percent of the annual prevalence rate, while the daily prevalence is

lower still—about 13 percent of the annual rate (Nord, Andrews, and Winicki, 2000).

Chapter 1 summarizes the annual prevalence of hunger among children in U.S. households, based on the children's food security scale. Prevalence rates of hunger among children in 1998 and 1999 are presented for all U.S. households with children and by household structure, race and ethnicity, income, and rural/urban residence. Annual trends are summarized from 1995 to 1999. Information from the household food security scale is then combined with information from the children's food security scale to provide a broader picture of the food security situation of the Nation's children.

The remainder of the report documents the measurement methodology. Chapter 2 describes the children's food security scale and discusses theoretical, statistical, and methodological issues regarding it. Chapter 3 explores the relationship between the hunger range of the children's food security scale and the conceptually similar "severe-hunger" range of the household scale. Appendix A presents the questions in the food security core survey module, and appendix B describes how to calculate the children's food security scale from the child-specific items in the core module.