Household Food Security in the United States, 2000. By Mark Nord, Nader Kabbani, Laura Tiehen, Margaret Andrews, Gary Bickel, and Steven Carlson. Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture, Food Assistance and Nutrition Research Report No. 21.

Abstract

Between 1998 and 2000, food insecurity fell by 11 percent and hunger by 16 percent. The declines were widespread, affecting most regions and types of households. For the year ending September 2000, nearly 90 percent of American households were food secure for the entire year. The rest were food insecure at least some time during the year, meaning they did not always have access to enough food for active, healthy lives for all household members. This report, based on data from the September 2000 food security survey, provides the most recent statistics on the food security of U.S. households, as well as on how much they spent on food and the extent to which food-insecure households participated in Federal and community food assistance programs. The authors estimate that the typical U.S. household spent 36 percent more than the cost of USDA's Thrifty Food Plan, while the typical food-insecure household spent 4 percent more. One-half of all food-insecure households participated in at least one of the three largest Federal food assistance programs in the month before the survey. About 17 percent of food-insecure households—2.4 percent of all U.S. households—obtained emergency food from a food pantry at some time during the year.

***Keywords*:** Food security, food insecurity, hunger, food spending, food pantry, soup kitchen, emergency kitchen, material well-being, Food Stamp Program, National School Lunch Program, WIC.

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Summary

Food security—access by all people at all times to enough food for an active healthy life—improved significantly in the United States from 1998 to 2000.[1] The prevalence of food insecurity fell by 11.3 percent and the prevalence of hunger fell by 15.6 percent, adjusted for population growth during the period. The improvement in food security was general and widespread in all regions of the country and for all household types.

Food security is one of several necessary conditions for a population to be healthy and well nourished. The U.S. Department of Agriculture (USDA) monitors food security in the Nation's households through an annual survey of some 40,000 households conducted by the U.S. Census Bureau. The most recent food security survey reveals that in 2000, 89.5 percent of U.S. households were food secure throughout the year. "Food secure" means they had access, at all times, to enough food for an active, healthy life for all household members. The remaining 10.5 percent of U.S. households (11 million) were food insecure. At some time during the previous year, these households were uncertain of having, or unable to acquire, enough food to meet basic needs of all their members because they had insufficient money or other resources. About one-third of food-insecure households (3.3 million, or 3.1 percent of all U.S. households) were food insecure to the extent that one or more household members were hungry, at least some time during the year, because they could not afford enough food. The other two-thirds of food-insecure households obtained enough food to avoid hunger, using a variety of coping strategies such as eating less varied diets, participating in Federal food assistance programs, or getting emergency food from community food pantries.

The amount households spend for food is an indicator of how adequately they are meeting their food needs. In 2000, the typical (median) U.S. household spent $37.50 per person for food each week. Weekly food spending by the typical household was about 36 percent higher than the cost of USDA's Thrifty Food Plan—a low-cost food "market basket" that meets dietary standards—taking into account household size and the age and gender of household members. The typical food-secure household spent 41 percent more than the cost of the Thrifty Food Plan. In contrast, the typical food-insecure household spent 4 percent more than the cost of the Thrifty Food Plan, and the typical household classified as food insecure with hunger spent 2 percent less.

Some households participate in Federal food assistance programs or turn to community resources such as food pantries and emergency kitchens for help when they lack money to buy food. Among all food-insecure households:

- 50.4 percent had help from at least one of the three largest Federal food assistance programs—food stamps, free or reduced-price school lunches, or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)—in the month before the survey;
- 16.7 percent obtained emergency food from a food pantry, church, or food bank during the 12 months before the survey; and
- 2.5 percent had members who ate at an emergency kitchen sometime during the 12 months before the survey.

Some 2.5 million households, 2.4 percent of all U.S. households, reported getting emergency food from food pantries, churches, or food banks at least once during the year.

[1]The rates of food insecurity and hunger observed in 2000 were slightly higher than those observed in 1999. Comparisons of 2000 statistics are made to 1998 rather than to 1999 because the food security surveys from which these statistics are calculated alternate between spring and fall in successive years. There is strong evidence of a seasonal component in year-to-year food insecurity rates that results from this data collection schedule and biases comparisons between adjacent years. Further information on this issue is detailed in Section 1.

Household Food Security in the United States, 2000

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Introduction

Since 1995, the U.S. Department of Agriculture has collected information annually on food spending, food access and adequacy, and sources of food assistance for the U.S. population. The information is collected in yearly food security surveys, conducted as a supplement to the nationally representative Current Population Survey (CPS). A major impetus for this data collection is to provide information about the prevalence of food insecurity and hunger in U.S. households. USDA reports in the series *Measuring Food Security in the United States* have summarized the findings of this research for each year from 1995 to 1999. (See appendix B for background on the development of the food security measures and a list of the reports.)

This report updates the national statistics on food security, using data collected in the September 2000 food security survey. It also provides estimates, based on newly developed methods, of the number and characteristics of households in the United States in which children have experienced hunger due to constrained household resources. For the first time in this report series, the report includes information on household food spending, how food-insecure households use Federal and community food assistance, and estimates of the number of households using community food pantries and emergency kitchens. These data provide additional insight into the nature of food insecurity and how low-income households meet their food needs.

Unless otherwise noted, statistical differences described in the text are significant at the 90-percent confidence level.

Section 1. Household Food Security

Food security—access by all people at all times to enough food for an active, healthy life—is one of several conditions necessary for a population to be healthy and well nourished. As part of the U.S. response to the United Nations' 1996 World Food Summit, the U.S. Department of Health and Human Services Healthy People 2010 initiative set a goal of increasing the rate of food security among U.S. households to 94 percent by the end of the decade. This section provides information on how the United States is progressing toward meeting this goal, based on the September 2000 food security survey—the sixth annual survey in the Nation's food security monitoring system.

Methods

The results presented in all three sections of this report are based on data collected in the Current Population Survey (CPS) food security surveys for the years 1995-2000. The measurement method for statistics presented in Section 1 uses responses to a series of questions about conditions and behaviors known to characterize households having difficulty meeting basic food needs.[2] Each question asks whether the condition or behavior occurred during the previous 12 months and specifies a lack of money or other resources to obtain food as the reason for the condition or behavior. Voluntary fasting or dieting to lose weight are thereby excluded from the measure. Response frequencies for the 18 items used to classify households are provided in appendix A. Full-question wordings are presented in Bickel et al., 2000, and are available from the ERS Food Security Briefing Room at <www.ers.usda.gov/briefing/foodsecurity>.

[2]The methods used to measure the extent of food insecurity and hunger have been described in several places (Hamilton et al., 1997a, 1997b; Andrews et al., 1998; Bickel et al.,1998; Carlson et al., 1999; Bickel et al., 2000.) Further details on the development of the measure are provided in appendix B.

Examples of Questions from the CPS Food Security Survey

"We worried whether our food would run out before we got money to buy more." Was that often, sometimes, or never true for you in the last 12 months?

"The food that we bought just didn't last and we didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?

In the last 12 months did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food?

In the last 12 months were you ever hungry, but didn't eat, because you couldn't afford enough food?

(For households with children) 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?

Interviewed households are classified into one of three categories—food secure, food insecure without hunger, food insecure with hunger—based on the household's overall pattern of response to all items. Households classified as food insecure with hunger that include children are further classified as to whether both children and adults were hungry or only adults. This classification is based on a subscale of items that ask specifically about conditions among children in the household. Appropriate weighting factors are then applied to the surveyed households to obtain nationally representative prevalence estimates.

Prevalence of Food Insecurity and Hunger—National Conditions and Trends

Nearly 90 percent of U.S. households were food secure throughout the entire year ending in September, 2000. "Food secure" means that all household members had access at all times to enough food for an active, healthy life. The remaining 11 million U.S. households (10.5 percent of all households) were food insecure at some time during the year. That is, they were uncertain of having, or unable to acquire, enough food to meet basic needs for all household members because they had insufficient money and other resources for food. About two-thirds of food-insecure households avoided hunger, in many cases by relying on a few basic foods and reducing variety in their diets. But 3.3 million households (3.1 percent of all U.S. households) were food insecure to the extent that one or more household members were hungry, at least some time during the year, because they couldn't afford enough food.

When interpreting food security statistics, it is important to keep in mind that households are classified as food insecure, or food insecure with hunger, if they experienced the condition at any time during the previous 12 months. The rates of food insecurity and hunger on any given day are far below the annual rates. The prevalence of hunger on a typical day is estimated to be about 13 to 18 percent of the annual rate (see box), or 430,000 to 600,000 households on a typical day in 2000.

Food insecurity and hunger declined between 1995, when they were first measured at the national level, and 2000 (fig. 1).[3] The year-to-year deviations from a consistent downward trend include a substantial 2-year cycle that is believed to result from a seasonal influence on food security prevalence rates. The CPS food security surveys over this period were conducted in April in odd-numbered years and August or September in even-numbered years. Measured prevalence of food insecurity was higher in the August/September collections, suggesting a seasonal response effect. If this is the case, then comparisons of prevalence rates between adjacent years are biased. To avoid this potential bias, statistics for 2000 are compared with 1998 throughout this report. Beginning in 2001, data will be collected in early December of every year, which will avoid further problems of seasonality effects in interpreting annual changes.

How often were people hungry in households with hunger?

When poverty-linked hunger occurs in the United States, it is, in most cases, occasional or episodic, not chronic. The food security scale on which the statistics in this report are based is designed to register these occasional or episodic occurrences. Most of the questions ask whether a condition, experience, or behavior occurred at any time in the past 12 months. Three of the questions ask how many months a specific condition or behavior occurred, but households can be classified as food insecure or hungry based on a single, severe episode during the year. It is important to keep this aspect of the scale in mind when interpreting food security and hunger statistics. ERS analysis of CPS Food Security Supplement questions additional to those used to calculate the food security scale has found that:

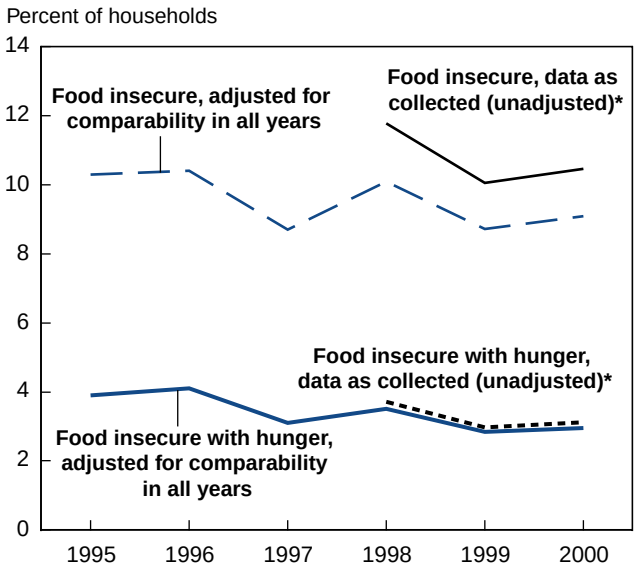
- About one-third of the hunger measured by the standard 12-month measure is rare or occasional, occurring in only 1 or 2 months of the year. Two-thirds is recurring, experienced in 3 or more months of the year.
- For about one-fifth of households classified as food insecure and one-fourth of those classified as hungry, occurrence of the condition was frequent or chronic. That is, it occurred often, or in almost every month.
- The monthly prevalence of resource-constrained hunger in the U.S. is about 60 percent of the annual prevalence, and the daily prevalence of hunger is 13 to 18 percent of the annual prevalence.

(See Nord et al., 2000, for further information about the frequency of food insecurity and hunger.)

[3]Because of changes in screening procedures used to reduce respondent burden, food security statistics from 1995 to 1997 are not directly comparable with those from 1998 to 2000. Figure 1 presents statistics for the years 1995-2000, adjusted to be comparable across all years, as well as statistics for 1998-2000 based on data as collected. See Andrews et al. (2000) and Ohls et al. (2001) for detailed information about questionnaire screening and adjustments for comparability.

Figure 1

Trends in prevalence of food insecurity and hunger in U.S. households, 1995-2000



*Data as collected in 1995-97 are not directly comparable with data collected in 1998-2000.

Source: Calculated by ERS based on Current Population Survey Food Security Supplement data.

Adjusted for population growth, the prevalence of food insecurity declined by 11.3 percent from 1998 to 2000 and the prevalence of food insecurity with hunger declined by 15.6 percent. The number of food-insecure households declined from 12.2 million in 1998 to 11.1 million in 2000, a decline of 8.9 percent (table 1). The number of households that were food insecure with hunger declined from 3.8 million to 3.3 million during the 2-year period, a decline of 13.6 percent. In most households, children were protected from substantial reductions in food intake and ensuing hunger. However in some 255,000 households (0.7 percent of all households with children), food insecurity was sufficiently severe that one or more children in each household were also hungry on one or more days during the year because the household lacked money for enough food. In some households with multiple children, not all the children experienced hunger. In particular, younger children are often protected from hunger even when older children are not.

Table 1—Prevalence of food security, food insecurity, and hunger for households and persons, by year

Unit	Total[1]	Food secure		Food insecure: All		Food insecure: Without hunger		Food insecure: With hunger	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
Households:									
1998	103,309	91,121	88.2	12,188	11.8	8,353	8.1	3,835	3.7
1999	104,684	94,154	89.9	10,529	10.1	7,420	7.1	3,109	3.0
2000	106,043	94,942	89.5	11,101	10.5	7,786	7.3	3,315	3.1
All individuals (by food security status of household):									
1998	268,366	232,219	86.5	36,147	13.5	26,290	9.8	9,857	3.7
1999	270,318	239,304	88.5	31,015	11.5	23,237	8.6	7,779	2.9
2000	273,685	240,454	87.9	33,231	12.1	24,708	9.0	8,523	3.1
Adults (by food security status of household):									
1998	197,084	174,964	88.8	22,120	11.2	15,632	7.9	6,488	3.3
1999	198,900	179,960	90.5	18,941	9.5	13,869	7.0	5,072	2.5
2000	201,922	181,586	89.9	20,336	10.1	14,763	7.3	5,573	2.8
Children (by food security status of household):									
1998	71,282	57,255	80.3	14,027	19.7	10,658	15.0	3,369	4.7
1999	71,418	59,344	83.1	12,074	16.9	9,368	13.1	2,707	3.8
2000	71,763	58,868	82.0	12,895	18.0	9,945	13.9	2,950	4.1

	Total[1]	Food secure		Food insecure: All		Food insecure: Without hunger among children		Food insecure: With hunger among children	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
Households with children:									
1998	38,036	31,335	82.4	6,701	17.6	6,370	16.7	331	.9
1999	37,884	32,290	85.2	5,594	14.8	5,375	14.2	219	.6
2000	38,113	31,942	83.8	6,171	16.2	5,916	15.5	255	.7
Children (by food security status of household):									
1998	71,282	57,255	80.3	14,027	19.7	13,311	18.7	716	1.0
1999	71,418	59,344	83.1	12,074	16.9	11,563	16.2	511	.7
2000	71,763	58,867	82.0	12,896	18.0	12,334	17.2	562	.8

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

Sources: Calculated by ERS using data from the August 1998, April 1999, and September 2000 Current Population Survey Food Security Supplements.

Prevalence of Food Insecurity and Hunger—Conditions and Trends, by Household Characteristics

The prevalence of food insecurity and hunger varied considerably among household types (table 2). Rates of food insecurity were well below the national average of 10.5 percent for households with more than one adult and no children (5.6 percent) and for households with elderly persons (5.9 percent).[4] Rates of food insecurity substantially higher than the national average were registered by the following groups:

- households with incomes below the official poverty line (36.8 percent),[5]
- households with children, headed by a single woman (31.0 percent),
- Black households (20.5 percent), and
- Hispanic households (21.4 percent).

Overall, households with children reported food insecurity at more than double the rate for households without children (16.2 vs. 7.3 percent). Among households with children, those with married-couple families showed the lowest rate of food insecurity (10.9 percent).

[4]"Elderly" in this report refers to persons age 65 and older.

[5]The Federal poverty line was $17,463 for a family of four in 2000.

The prevalence of food insecurity for households located in central cities (14.2 percent) and nonmetropolitan areas (11.5 percent) substantially exceeded the rate for households in suburbs and other metropolitan areas outside central cities (7.7 percent). Regionally, the prevalence of food insecurity was higher in the South and West (11.8 and 11.7 percent, respectively) than in the Midwest and Northeast (8.8 and 8.7 percent).

The prevalence of hunger in various types of households followed a pattern similar to that observed for food insecurity. Hunger rates were lowest for married couples with children (1.9 percent), multiple-adult households with no children (1.9 percent), and households with elderly persons (1.5 percent). Hunger rates were much higher than the 3.1 percent national average among families headed by single women (9.0 percent), Black and Hispanic households (6.5 and 4.8 percent, respectively), and households below the poverty line (12.7 percent). Geographically, hunger was more common in central-city households (4.3 percent) and in those in the South and West (3.4 and 3.5 percent, respectively).

The declines in food insecurity and hunger at the national level from 1998 to 2000 were widespread and general, affecting almost all regions and types of households (figs. 2 and 3). Observed rates of food insecurity declined, or changes were statistically insignificant, in all categories studied. The declines were largest for some of the most economically disadvantaged groups, especially for single women with children and for Blacks and Hispanics. Even among lower income households, food insecurity and hunger declined somewhat during the period.

Table 2—Prevalence of food security, food insecurity, and hunger by selected household characteristics, 2000

Category	Total[1]	Food secure		Food insecure:					
				All		Without hunger		With hunger	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
All households	106,043	94,942	89.5	11,101	10.5	7,786	7.3	3,315	3.1
Household composition:									
With children < 18	38,113	31,942	83.8	6,171	16.2	4,748	12.5	1,423	3.7
With children < 6	17,271	14,229	82.4	3,042	17.6	2,403	13.9	639	3.7
Married-couple families	26,366	23,500	89.1	2,866	10.9	2,355	8.9	511	1.9
Female head, no spouse	9,070	6,255	69.0	2,815	31.0	2,002	22.1	813	9.0
Male head, no spouse	2,099	1,728	82.3	371	17.7	290	13.8	81	3.9
Other household with child[2]	578	457	79.1	121	20.9	102	17.6	19	3.3
With no children < 18	67,930	63,000	92.7	4,930	7.3	3,038	4.5	1,892	2.8
More than one adult	40,436	38,160	94.4	2,276	5.6	1,512	3.7	764	1.9
Women living alone	16,157	14,527	89.9	1,630	10.1	976	6.0	654	4.0
Men living alone	11,336	10,313	91.0	1,023	9.0	549	4.8	474	4.2
With elderly	24,926	23,447	94.1	1,479	5.9	1,097	4.4	382	1.5
Elderly living alone	10,125	9,409	92.9	716	7.1	523	5.2	193	1.9
Race/ethnicity of households:									
White non-Hispanic	79,697	73,633	92.4	6,064	7.6	4,147	5.2	1,917	2.4
Black non-Hispanic	12,813	10,182	79.5	2,631	20.5	1,802	14.1	829	6.5
Hispanic[3]	9,445	7,428	78.6	2,017	21.4	1,562	16.5	455	4.8
Other non-Hispanic	4,088	3,699	90.5	389	9.5	275	6.7	114	2.8
Household income-to-poverty ratio:									
Under 1.00	12,106	7,657	63.2	4,449	36.8	2,906	24.0	1,543	12.7
Under 1.30	17,583	11,782	67.0	5,801	33.0	3,889	22.1	1,912	10.9
Under 1.85	25,872	18,821	72.7	7,051	27.3	4,837	18.7	2,214	8.6
1.85 and over	63,263	60,336	95.4	2,927	4.6	2,173	3.4	754	1.2
Income unknown	16,908	15,785	93.4	1,123	6.6	776	4.6	347	2.1
Area of residence:									
Inside metropolitan area	85,372	76,652	89.8	8,720	10.2	6,118	7.2	2,602	3.0
In central city[4]	26,545	22,779	85.8	3,766	14.2	2,631	9.9	1,135	4.3
Not in central city[4]	43,848	40,486	92.3	3,362	7.7	2,336	5.3	1,026	2.3
Outside metropolitan area	20,671	18,290	88.5	2,381	11.5	1,668	8.1	713	3.4
Census geographic region:									
Northeast	20,124	18,360	91.2	1,764	8.8	1,215	6.0	549	2.7
Midwest	25,264	23,070	91.3	2,194	8.7	1,526	6.0	668	2.6
South	37,658	33,213	88.2	4,445	11.8	3,147	8.4	1,298	3.4
West	22,997	20,299	88.3	2,698	11.7	1,898	8.3	800	3.5

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

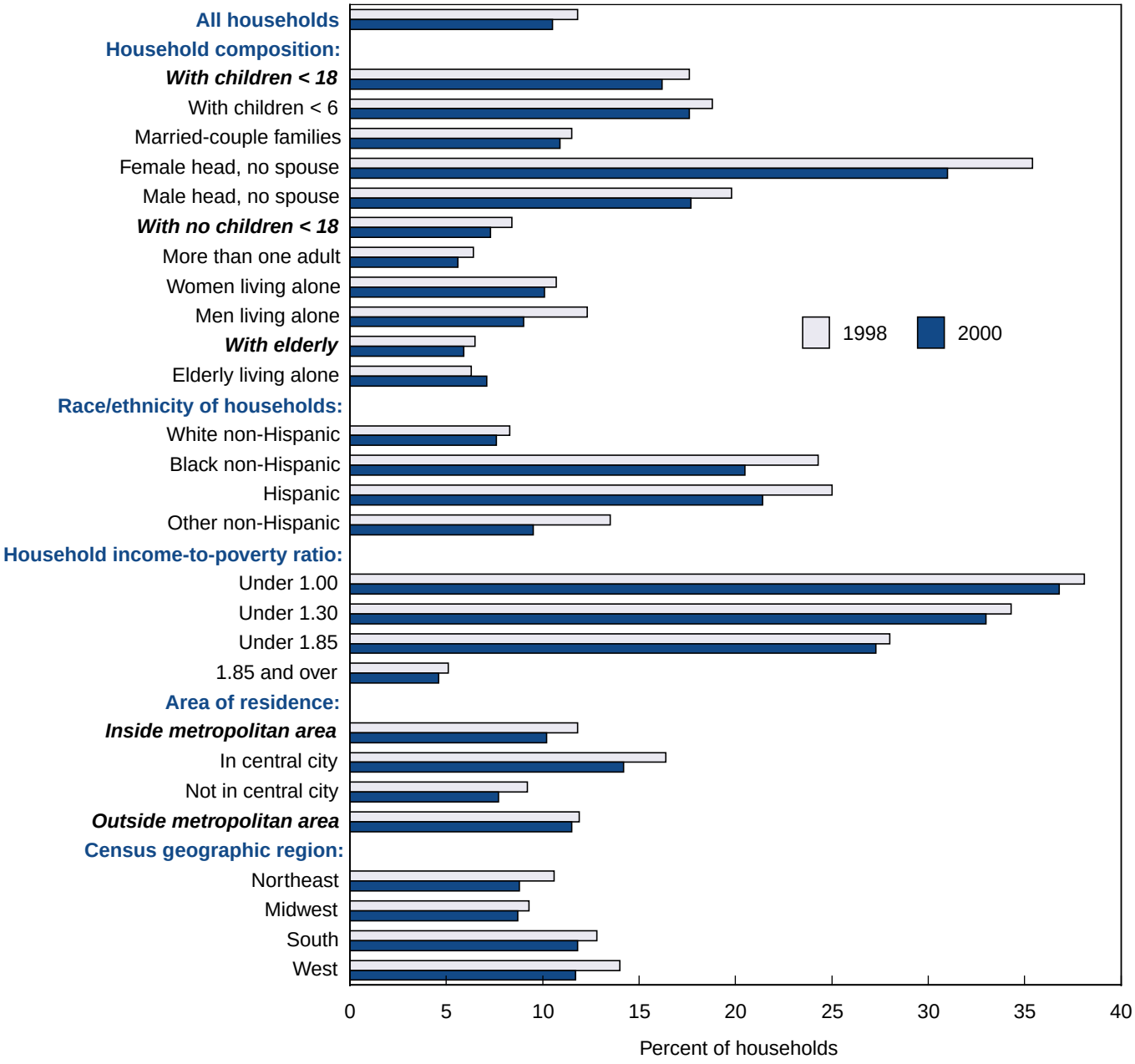
[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Figure 2

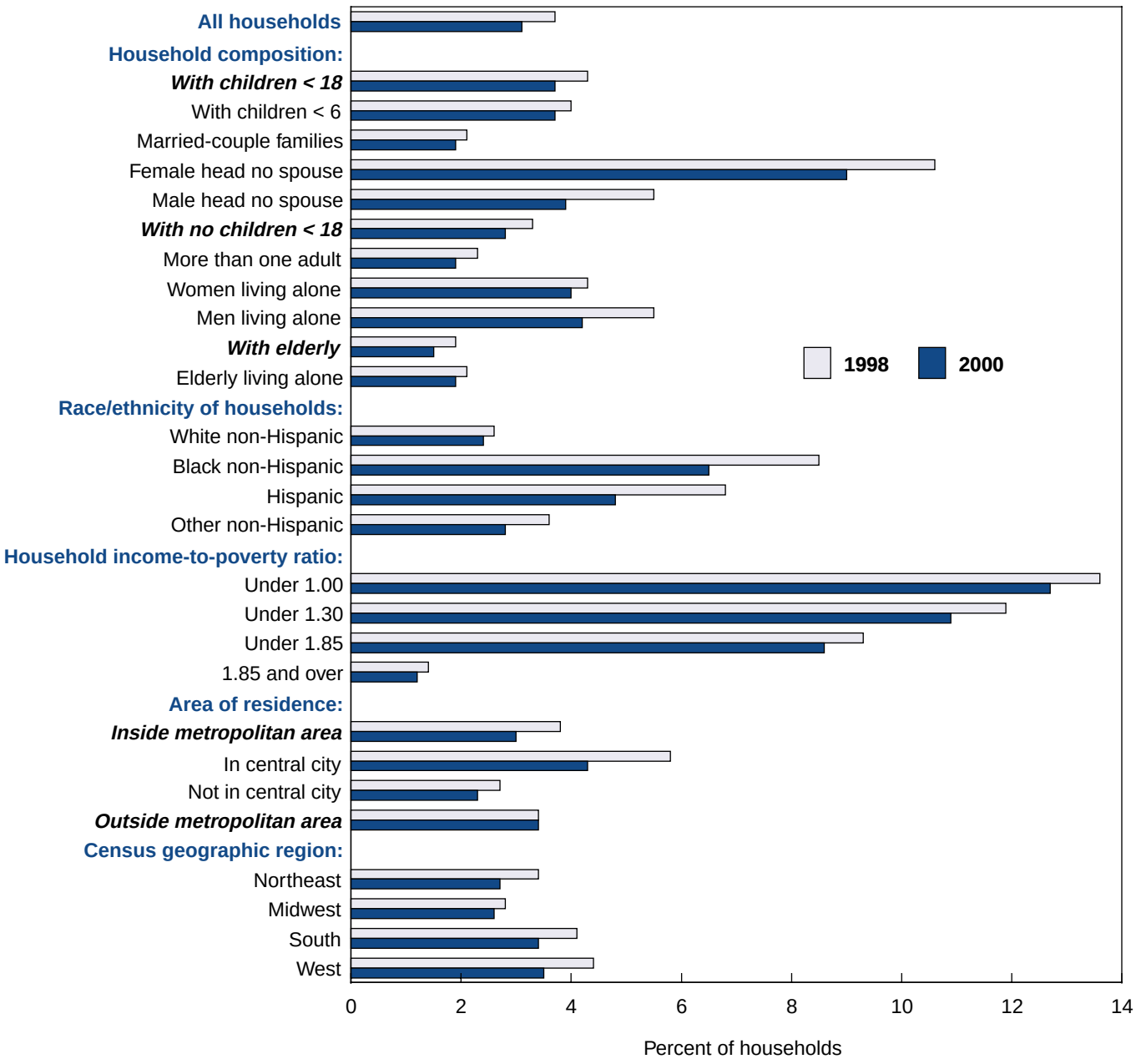
Change in prevalence of food insecurity, 1998-2000



Source: Calculated by ERS based on Current Population Survey Food Security Supplement data, August 1998 and September 2000.

Figure 3

Change in prevalence of hunger, 1998-2000



Source: Calculated by ERS based on Current Population Survey Food Security Supplement data, August 1998 and September 2000.

Food Insecurity and Hunger Among Children

Children—especially younger children—in U.S. households are usually protected from substantial reductions in food intake except when households experience very high levels of food insecurity. Recent research (Nord and Bickel, 2001) has shown that the presence of hunger among children in food-insecure households is more adequately measured by a subscale of the food security questions that ask specifically about the conditions and experiences of children. This subscale identifies food-insecure households in which at least one child, as well as an adult (or adults), was hungry at some time during the year because the household lacked sufficient money for food. Estimates for the number of households with hunger among children, using this subscale, are shown in the lower panel of table 1.

Nationally, 255,000 households (0.7 percent of all households with children) were classified as food insecure with hunger among children in 2000. This is a 23-percent decline from the 331,000 households with hunger among children in 1998. Households showing the lowest rates of hunger among children were married-couple families, male-headed households, and households with higher incomes (table 3). Children living with a single mother were more affected by resource-constrained hunger, as were Black and Hispanic children.

Table 3—Prevalence of food security, food insecurity, and hunger in households with children by selected household characteristics, 2000

Category	Total[1]	Food secure		Food insecure: All		Food insecure: Without hunger among children		Food insecure: With hunger among children	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
All households with children	38,113	31,942	83.8	6,171	16.2	5,916	15.5	255	0.7
Household composition:									
With children < 6	17,271	14,229	82.4	3,042	17.6	2,951	17.1	91	.5
Married-couple families	26,366	23,500	89.1	2,866	10.9	2,773	10.5	93	.4
Female head, no spouse	9,070	6,256	69.0	2,814	31.0	2,660	29.3	154	1.7
Male head, no spouse	2,099	1,729	82.4	370	17.6	365	17.4	5	.2
Other household with child[2]	578	456	78.9	122	21.1	118	20.4	4	.7
Race/ethnicity of households:									
White non-Hispanic	25,410	22,463	88.4	2,947	11.6	2,871	11.3	76	.3
Black non-Hispanic	5,497	4,005	72.9	1,492	27.1	1,402	25.5	90	1.6
Hispanic[3]	5,433	3,936	72.4	1,497	27.6	1,420	26.1	77	1.4
Other non-Hispanic	1,774	1,538	86.7	236	13.3	223	12.6	13	.7
Household income-to-poverty ratio:									
Under 1.00	5,625	3,062	54.4	2,563	45.6	2,438	43.3	125	2.2
Under 1.30	8,072	4,689	58.1	3,383	41.9	3,224	39.9	159	2.0
Under 1.85	11,344	7,193	63.4	4,151	36.6	3,968	35.0	183	1.6
1.85 and over	22,173	20,692	93.3	1,481	6.7	1,423	6.4	58	.3
Income unknown	4,597	4,058	88.3	539	11.7	525	11.4	14	.3
Area of residence:									
Inside metropolitan area	30,900	26,075	84.4	4,825	15.6	4,609	14.9	216	.7
In central city[4]	8,920	6,905	77.4	2,015	22.6	1,936	21.7	79	.9
Not in central city[4]	16,580	14,637	88.3	1,943	11.7	1,833	11.1	110	.7
Outside metropolitan area	7,214	5,868	81.3	1,346	18.7	1,307	18.1	39	.5
Census geographic region:									
Northeast	6,791	5,913	87.1	878	12.9	843	12.4	35	.5
Midwest	8,965	7,719	86.1	1,246	13.9	1,194	13.3	52	.6
South	13,422	11,019	82.1	2,403	17.9	2,302	17.2	101	.8
West	8,935	7,290	81.6	1,645	18.4	1,577	17.6	68	.8
Individuals in households with children:									
All individuals in households with children	152,995	127,858	83.6	25,137	16.4	24,055	15.7	1,082	.7
Adults in households with children	81,232	68,990	84.9	12,242	15.1	11,721	14.4	521	.6
Children	71,763	58,867	82.0	12,896	18.0	12,334	17.2	562	.8

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Food Insecurity and Hunger in Low-Income Households

Food insecurity and hunger, as reported here, are by definition conditions that result from insufficient household resources. In 2000, food insecurity was six times as prevalent, and hunger seven times as prevalent, in households with annual income below 185 percent of the poverty line as in households with income above that range (table 2). However, many factors that might affect a household's food security (such as job loss, divorce, or other unexpected events) are not captured by an annual income measure. Some households experienced episodes of food insecurity, or even hunger, even though their annual income was well above the poverty line (Gundersen and Gruber, 2001). On the other hand, many low-income households (including almost two-thirds of those with income below the official poverty line) were food secure.

Table 4 presents food security and hunger statistics for households with annual incomes below 130 percent of the poverty line.[6] One-third of these low-income households were food insecure, and in 10.9 percent household members were hungry at times during the year. Low-income households with children were more affected by food insecurity than households without children (41.9 percent vs. 25.4 percent). However, the prevalence of hunger in the two categories was about the same. Low-income single mothers with children were especially vulnerable to both food insecurity and hunger; 46.5 percent of these households were food insecure, including 14.4 percent in which one or more persons, usually the mother, was hungry at times during the year because of lack of money or other resources for food.

[6]Households with income below 130 percent of the poverty line are eligible to receive food stamps, provided they meet other eligibility criteria. Children in these households are eligible for free meals in the National School Lunch and School Breakfast Programs.

Table 4—Prevalence of food security, food insecurity, and hunger in households with income below 130 percent of the poverty line by selected household characteristics, 2000

Category	Total[1]	Food secure		Food insecure: All		Food insecure: Without hunger		Food insecure: With hunger	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
All low-income households	17,583	11,782	67.0	5,801	33.0	3,889	22.1	1,912	10.9
Household composition:									
With children < 18	8,072	4,689	58.1	3,383	41.9	2,527	31.3	856	10.6
With children < 6	4,348	2,597	59.7	1,751	40.3	1,326	30.5	425	9.8
Married-couple families	3,359	2,113	62.9	1,246	37.1	1,015	30.2	231	6.9
Female head, no spouse	3,998	2,138	53.5	1,860	46.5	1,285	32.1	575	14.4
Male head, no spouse	575	366	63.7	209	36.3	168	29.2	41	7.1
Other household with child[2]	140	73	52.1	67	47.9	58	41.4	9	6.4
With no children < 18	9,511	7,093	74.6	2,418	25.4	1,362	14.3	1,056	11.1
More than one adult	3,882	2,924	75.3	958	24.7	585	15.1	373	9.6
Women living alone	3,716	2,804	75.5	912	24.5	511	13.8	401	10.8
Men living alone	1,913	1,364	71.3	549	28.7	266	13.9	283	14.8
With elderly	4,172	3,355	80.4	817	19.6	580	13.9	237	5.7
Elderly living alone	2,361	1,947	82.5	414	17.5	291	12.3	123	5.2
Race/ethnicity of households:									
White non-Hispanic	9,454	6,759	71.5	2,695	28.5	1,696	17.9	999	10.6
Black non-Hispanic	4,043	2,432	60.2	1,611	39.8	1,056	26.1	555	13.7
Hispanic[3]	3,253	1,967	60.5	1,286	39.5	997	30.6	289	8.9
Other non-Hispanic	833	623	74.8	210	25.2	140	16.8	70	8.4
Area of residence:									
Inside metropolitan area	12,934	8,530	66.0	4,404	34.0	2,969	23.0	1,435	11.1
In central city[4]	5,501	3,399	61.8	2,102	38.2	1,385	25.2	717	13.0
Not in central city[4]	4,689	3,277	69.9	1,412	30.1	958	20.4	454	9.7
Outside metropolitan area	4,649	3,252	70.0	1,397	30.0	920	19.8	477	10.3
Census geographic region:									
Northeast	2,821	1,953	69.2	868	30.8	564	20.0	304	10.8
Midwest	3,661	2,556	69.8	1,105	30.2	728	19.9	377	10.3
South	7,240	4,810	66.4	2,430	33.6	1,615	22.3	815	11.3
West	3,861	2,463	63.8	1,398	36.2	981	25.4	417	10.8
Individuals in low-income households (by food security status of household):									
All individuals in low-income households	48,786	30,852	63.2	17,934	36.8	12,991	26.6	4,943	10.1
Adults in low-income households	30,690	20,497	66.8	10,193	33.2	7,157	23.3	3,036	9.9
Children in low-income households	18,096	10,354	57.2	7,742	42.8	5,834	32.2	1,908	10.5

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Number of Persons, by Household Food Security Status and Household Type

The food security survey is designed to measure food security status at the household level. While it is informative to examine the number of persons residing in food-insecure households, these estimates should not be used to characterize the number of individuals affected by food insecurity and hunger; not all persons in food-insecure households are food insecure. Similarly, people who live in households classified as food insecure with hunger, especially young children, are not all subject to reductions in food intake and do not all experience hunger.

In 2000, 33.2 million people lived in food-insecure households, down from 36.1 million in 1998 (table 1). They constituted 12.1 percent of the U.S. population and included 20.3 million adults and 12.9 million children. Of these individuals, 5.6 million adults and 3 million children lived in households where someone experienced hunger during the year. The number of children living in households classified as food insecure with hunger among children was 562,000 (0.8 percent of the children in the Nation), down from the 716,000 children living in such households in 1998 (table 1). Tables 5 and 6 present estimates of the numbers of *persons* and *children* in the households in each food security status and household type.

Table 5—Number of individuals by food security status of households and selected household characteristics, 2000

Category	Total[1]	Food secure		Food insecure: All		Food insecure: Without hunger		Food insecure: With hunger	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
All individuals in households	273,685	240,454	87.9	33,231	12.1	24,708	9.0	8,523	3.1
Household composition:									
With children < 18	152,995	127,857	83.6	25,138	16.4	19,489	12.7	5,649	3.7
With children < 6	72,810	59,413	81.6	13,397	18.4	10,580	14.5	2,817	3.9
Married-couple families	112,734	99,496	88.3	13,238	11.7	10,782	9.6	2,456	2.2
Female head, no spouse	30,705	20,715	67.5	9,990	32.5	7,204	23.5	2,786	9.1
Male head, no spouse	7,410	5,964	80.5	1,446	19.5	1,123	15.2	323	4.4
Other household with child[2]	2,146	1,683	78.4	463	21.6	380	17.7	83	3.9
With no children < 18	120,690	112,597	93.3	8,093	6.7	5,219	4.3	2,874	2.4
More than one adult	93,196	87,756	94.2	5,440	5.8	3,694	4.0	1,746	1.9
Women living alone	16,157	14,526	89.9	1,631	10.1	977	6.0	654	4.0
Men living alone	11,336	10,313	91.0	1,023	9.0	549	4.8	474	4.2
With elderly	47,580	44,416	93.4	3,164	6.6	2,396	5.0	768	1.6
Elderly living alone	10,125	9,409	92.9	716	7.1	523	5.2	193	1.9
Race/ethnicity of households:									
White non-Hispanic	195,171	178,962	91.7	16,209	8.3	11,759	6.0	4,450	2.3
Black non-Hispanic	33,505	25,755	76.9	7,750	23.1	5,631	16.8	2,119	6.3
Hispanic[3]	32,945	24,920	75.6	8,025	24.4	6,365	19.3	1,660	5.0
Other non-Hispanic	12,065	10,818	89.7	1,247	10.3	953	7.9	294	2.4
Household income-to-poverty ratio:									
Under 1.00	33,447	19,750	59.0	13,697	41.0	9,763	29.2	3,934	11.8
Under 1.30	48,786	30,852	63.2	17,934	36.8	12,991	26.6	4,943	10.1
Under 1.85	71,509	49,402	69.1	22,107	30.9	16,279	22.8	5,828	8.2
1.85 and over	163,288	155,215	95.1	8,073	4.9	6,348	3.9	1,725	1.1
Income unknown	38,888	35,838	92.2	3,050	7.8	2,081	5.4	969	2.5
Area of residence:									
Inside metropolitan area	221,518	195,268	88.1	26,250	11.9	19,467	8.8	6,783	3.1
In central city[4]	65,772	54,511	82.9	11,261	17.1	8,451	12.8	2,810	4.3
Not in central city[4]	117,791	107,349	91.1	10,442	8.9	7,579	6.4	2,863	2.4
Outside metropolitan area	52,167	45,186	86.6	6,981	13.4	5,241	10.0	1,740	3.3
Census geographic region:									
Northeast	51,263	46,301	90.3	4,962	9.7	3,637	7.1	1,325	2.6
Midwest	64,650	58,078	89.8	6,572	10.2	4,862	7.5	1,710	2.6
South	95,197	82,340	86.5	12,857	13.5	9,575	10.1	3,282	3.4
West	62,576	53,735	85.9	8,841	14.1	6,634	10.6	2,207	3.5

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Table 6—Number of children by food security status of households and selected household characteristics, 2000

Category	Total[1]	Food secure		Food insecure: All		Without hunger among children		With hunger among children	
	1,000	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*	*1,000*	*Percent*
All children	71,763	58,868	82.0	12,895	18.0	12,333	17.2	562	0.8
Household composition:									
With children < 6	36,225	29,084	80.3	7,141	19.7	6,903	19.1	238	.7
Married-couple families	51,104	44,760	87.6	6,344	12.4	6,127	12.0	217	.4
Female head, no spouse	16,301	10,675	65.5	5,626	34.5	5,292	32.5	334	2.0
Male head, no spouse	3,501	2,775	79.3	726	20.7	723	20.7	3	.1
Other household with child[2]	857	657	76.7	200	23.3	192	22.4	8	.9
Race/ethnicity of households:									
White non-Hispanic	46,089	40,393	87.6	5,696	12.4	5,553	12.0	143	.3
Black non-Hispanic	10,576	7,378	69.8	3,198	30.2	3,018	28.5	180	1.7
Hispanic[3]	11,706	8,186	69.9	3,520	30.1	3,324	28.4	196	1.7
Other non-Hispanic	3,391	2,909	85.8	482	14.2	439	12.9	43	1.3
Household income-to-poverty ratio:									
Under 1.00	12,786	6,756	52.8	6,030	47.2	5,753	45.0	277	2.2
Under 1.30	18,096	10,355	57.2	7,741	42.8	7,384	40.8	357	2.0
Under 1.85	25,150	15,711	62.5	9,439	37.5	9,006	35.8	433	1.7
1.85 and over	39,891	37,290	93.5	2,601	6.5	2,504	6.3	97	.2
Income unknown	6,723	5,868	87.3	855	12.7	824	12.3	31	.5
Area of residence:									
Inside metropolitan area	58,188	48,082	82.6	10,106	17.4	9,627	16.5	479	.8
In central city[4]	16,904	12,503	74.0	4,401	26.0	4,226	25.0	175	1.0
Not in central city[4]	31,292	27,336	87.4	3,956	12.6	3,703	11.8	253	.8
Outside metropolitan area	13,575	10,785	79.4	2,790	20.6	2,707	19.9	83	.6
Census geographic region:									
Northeast	12,557	10,804	86.0	1,753	14.0	1,691	13.5	62	.5
Midwest	17,200	14,435	83.9	2,765	16.1	2,620	15.2	145	.8
South	24,541	19,747	80.5	4,794	19.5	4,581	18.7	213	.9
West	17,464	13,879	79.5	3,585	20.5	3,443	19.7	142	.8

[1]Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2000, these represented 318,000 households (0.3 percent of all households.)

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Section 2. Household Spending on Food

This section provides information on how much households spend for food, as reported in the September 2000 food security survey. Food insecurity is a condition that arises specifically from lack of money and other resources to acquire food. In most households, the majority of food consumed by household members is purchased—either from supermarkets or grocery stores, to be eaten at home, or from cafeterias, restaurants, or vending machines to be eaten outside the home. The amount of money that a household spends on food, therefore, provides insight into how adequately it is meeting its food needs.[7] Inadequate spending for food can be seen as the process through which constrained resources reduce food consumption, disrupt eating patterns, and lead to food insecurity and hunger. Thus, the amount different types of households spend for food, and the relationship between food security and food spending, can provide additional insights into the nature of food insecurity and how households meet their food needs.

Methods

The household food expenditure statistics in this report are based on *usual* weekly spending for food, as reported after the respondent was given a chance to reflect on the details of the household's actual food spending during the previous week.[8] Respondents were first asked about the actual amount of money their households spent on food in the week prior to the interview (including any purchases made with food stamps) at (a) supermarkets and grocery stores; (b) stores other than supermarkets and grocery stores such as meat markets, produce stands, bakeries, warehouse clubs, and convenience stores; (c) restaurants, fast food places, cafeterias, and vending machines; and (d) any other kind of place.[9] Total spending for food, based on responses to this series of questions, was verified with the respondent, and the respondent was then asked how much the household *usually* spent on food during a week. Earlier analyses by ERS researchers found that food expenditures estimated from data collected by this method were consistent with estimates from the Consumer Expenditure Survey (CES)—the principal source of data on U.S. household expenditures for goods and services (Oliveira and Rose, 1996).

To compare food spending meaningfully across various types of households, expenditures must be adjusted for household size and composition. Two statistics are presented in this section. The first is calculated by dividing each household's usual weekly food spending by the number of persons in the household, yielding the "usual weekly food spending per person" for that household. The median of this measure is calculated at the national level and for households in various categories to represent the usual weekly food spending per person of the typical household in each category.

The second statistic adjusts more precisely for the different food needs of men, women, and children of various ages by comparing each household's usual spending to the estimated cost of the Thrifty Food Plan for that household.[10] The cost of the Thrifty Food Plan was calculated for each household in the September 2000 CPS food security survey, based on the age and gender of each household member and the number of persons in the household (see appendix table C-1). The household's reported usual weekly food spending was

[7]Food spending is, however, only an indirect indicator of food consumption. It understates food consumption in households that receive food from in-kind programs, such as the School Lunch and School Breakfast Programs, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), meal programs for elderly, and private charitable organizations. (Food stamps, however, are counted as food spending in the CPS food security survey.) Food spending also understates food consumption in households that acquire a substantial part of their food supply through gardening, hunting, or fishing, as well as in households that eat more meals at friends' or relatives' homes than they provide to friends or relatives. (Food spending overstates food consumption in households with the opposite characteristic.) Food spending also understates food consumption in geographical areas with relatively low food prices and overstates consumption in areas with high food prices.

[8]In CPS food security surveys that asked about both actual and usual food spending per week, median actual food spending was higher than median usual food spending. This finding was consistent across the various years in which the survey was conducted and across different household types in the 2000 survey. The reasons for this difference are under study. Pending outcomes of this research, analysts should be aware of a possible downward bias on food spending statistics based on "usual" food spending data.

[9]For spending in the first two categories of stores, respondents were also asked how much of the amount was for "nonfood items such as pet food, paper products, detergents, or cleaning supplies." These amounts are not included in calculating spending for food.

[10]The Thrifty Food Plan—developed by USDA—serves as a national standard for a nutritious diet at low cost. It represents a set of "market baskets" of food that people of specific age and gender could consume at home to maintain a healthful diet that meets current dietary standards, taking into account the food consumption patterns of U.S. households. The Thrifty Food Plan, in addition to its use as a research tool, is used as a basis for setting the maximum benefit amounts of the Food Stamp Program. (See appendix C for further information on the Thrifty Food Plan and estimates of the weekly cost of the Thrifty Food Plan and three other USDA food plans for each age-gender group.)

then divided by the cost of the Thrifty Food Plan for that household to provide a measure of the household's "relative" food spending. The median of this ratio for a specified group of households represents food spending, relative to the cost of the Thrifty Food Plan, of the typical household in that group. The median is reported rather than the mean (or arithmetic average) because the median is not unduly affected by the few unexpectedly high values of usual food spending that are believed to be reporting errors or data entry errors. Thus, the median better reflects what a typical household spent relative to the Thrifty Food Plan.

The two statistics, median weekly spending on food per person and median spending on food relative to the cost of the Thrifty Food Plan, were calculated at the national level and for selected categories of households. Data were weighted using food security supplement weights provided by the Census Bureau so that the interviewed households would represent all households in the United States. About 6.6 percent of households interviewed in the CPS food security survey did not respond to the food spending questions and were excluded from the analysis. As a result, the total number of households represented in tables 7 and 8 is 99.4 million rather than the actual total of 106.4 million.

Food Expenditures, by Selected Household Characteristics

At the national level, median household spending on food, relative to the cost of the Thrifty Food Plan, was 1.36 (table 7). That is, the typical household usually spent 36 percent more on food than the cost of the Thrifty Food Plan for its household type; this amounted to $37.50 per person.[11] This latter statistic, median weekly food expenditures per person, is provided in table 7 as a readily understood point of reference. However, primary attention in the following discussion is given to median weekly food expenditures relative to the Thrifty Food Plan, because that statistic more reliably represents the relationship between food expenditures and the food needs of individual households.

Households with children generally spent less for food (relative to the Thrifty Food Plan) than those without children. The typical household with children under age 18 spent 22 percent more than the cost of the Thrifty Food Plan (relative food spending=1.22), while the typical household with no children spent 47 percent more than the cost of the Thrifty Food Plan (relative food spending=1.47). Median food expenditures relative to the Thrifty Food Plan were lower for single females with children (1.11) and for single males with children (1.19) than for married couples with children (1.25). Median food expenditures relative to the Thrifty Food Plan were highest for men living alone (1.74).

Median food expenditures relative to the Thrifty Food Plan were lower for Black households (1.16) and Hispanic households (1.20) than for non-Hispanic White households (1.42). This finding is consistent with the lower average incomes and higher poverty rates of these racial and ethnic minorities.

As expected, higher income households spent more money on food than lower income households.[12] The typical household with income below the poverty threshold spent slightly less than the cost of the Thrifty Food Plan (relative food spending=0.98), while the typical household with income above 1.85 times the poverty line spent 52 percent more than the cost of the Thrifty Food Plan.

Median relative food spending of households outside metropolitan areas was 1.17, compared with 1.42 for households inside metropolitan areas. Median spending on food by households in the Midwest and South (both 1.32) was slightly lower than that for households in the Northeast (1.41) and West (1.47).

[11]Several ERS studies have estimated food spending per person using different data sources and methods (Blaylock et al., 1992; Blisard, 2001; Clauson, 2000; and Frazao, 1992). For example, Blisard (2000) reported average weekly per person food spending of $39.00 based on data from the 1998 Consumer Expenditure Survey (CES). This statistic is not directly comparable to the estimate of $37.50 reported here, however. The CES-based estimate is the mean (arithmetic average), while the median is reported here. Preliminary analysis of CES data by ERS suggests median weekly per person food spending of $37.00, which is very close to the estimate based on the CPS food security survey.

[12]However, food spending does not rise proportionately with income increases, so high-income households actually spend a smaller proportion of their income on food than do low-income households.

Table 7—Weekly food spending relative to the cost of the Thrifty Food Plan (TFP), 2000

Category	Median weekly food spending		
	Total[1]	Per person	Relative to TFP
	1,000	*Dollars*	*Ratio*
All households	99,383	37.50	1.36
Household composition:			
With children < 18	36,435	30.00	1.22
At least one child < 6	16,577	27.00	1.21
Married-couple families	25,291	31.30	1.25
Female head, no spouse	8,615	27.30	1.11
Male head, no spouse	1,977	30.00	1.19
Other household with child[2]	522	31.30	1.24
With no children < 18	62,948	45.00	1.47
More than one adult	37,709	40.00	1.41
Women living alone	14,720	45.00	1.46
Men living alone	10,519	60.00	1.74
With elderly	22,442	36.00	1.27
Elderly living alone	8,913	40.00	1.30
Race/ethnicity of households:			
White non-Hispanic	74,854	40.00	1.42
Black non-Hispanic	11,780	32.50	1.16
Hispanic[3]	8,973	31.30	1.20
Other non-Hispanic	3,776	37.00	1.32
Household income-to-poverty ratio:			
Under 1.00	11,566	26.70	.98
Under 1.30	16,802	27.50	1.02
Under 1.85	24,716	29.00	1.06
1.85 and over	60,701	41.70	1.52
Income unknown	13,966	37.50	1.32
Area of residence:			
Inside metropolitan area	79,884	40.00	1.42
In central city[4]	24,742	40.00	1.43
Not in central city[4]	40,921	40.00	1.45
Outside metropolitan area	19,499	32.50	1.17
Census geographic region:			
Northeast	18,572	40.00	1.41
Midwest	23,633	36.70	1.32
South	35,393	37.50	1.32
West	21,785	40.00	1.47

[1]Totals exclude households that did not answer the questions about spending on food. These represent 6.6 percent of all households.
[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.
[3]Hispanics may be of any race.
[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Food Expenditures and Household Food Security

Spending on food was generally associated with household food security; food-secure households typically spent more on food than food-insecure households. Median food spending relative to the cost of the Thrifty Food Plan was 1.41 among food-secure households, compared with 1.06 among households classified as food insecure without hunger and 0.98 among those classified as food insecure with hunger (table 8). Thus, the typical food-secure household spent 44 percent more for food than the typical household of the same size and composition that was food insecure with hunger. Fewer than half of the households that were food insecure with hunger spent, on a usual basis, enough on food to provide household members with the low-cost meals specified in the Thrifty Food Plan.

The relationship between food expenditures and food security was also consistent across household structure, race/ethnicity, income, metropolitan residence, and geographic region (table 9). For food-secure households, median food spending for every household type was above the cost of the Thrifty Food Plan—the lowest being 1.05 for households with incomes below the poverty threshold. Furthermore, for every household type, median food spending relative to the Thrifty Food Plan was higher for food-secure than food-insecure households and higher for food-insecure households without hunger than for food-insecure households with hunger. Not all of these differences were statistically significant, but the associations were consistently in the direction expected.

Although the *relationship* between food expenditures and food security was consistent, the *levels* of food expenditure varied substantially across household types, even within the same food security status. For food-insecure households, food expenditures of the typical households in most categories were close to the cost of the Thrifty Food Plan, but there were some notable exceptions. Food insecure individuals living alone—both women and men—spent much more on food than the cost of the Thrifty Food Plan for their age and gender—24 percent more for women living alone and 31 percent more for men living alone. For men living alone, this higher-than-expected food spending was observed even for those classified as food insecure with hunger. Food-insecure households (both with and without hunger) with incomes above 1.85 times the poverty line also registered median food expenditures much higher than the national median.[13]

For households registering food insecurity with hunger, median food spending relative to the Thrifty Food Plan was lower than the national median for female-headed families with children (0.87) and for households with income below the poverty line (0.90).[14]

[13]Analysis by ERS (Nord et al., 2000) has found that the experiences of food insecurity of higher and middle-income households are, disproportionately, occasional and of short duration. Their food expenditures during those food-insecure periods may have been lower than the amount they reported as their "usual" weekly spending for food.

[14]To a substantial extent, these were the same households. Among households classified as food insecure with hunger, two-thirds of the female-headed families with children had income below the poverty line, and one-third of those with income below the poverty line were female-headed families with children. Their lower level of food expenditure reflects the more severe, more frequent, and longer lasting hunger experiences of these households (Nord et al., 2000).

Table 8—Weekly household food spending relative to the cost of the Thrifty Food Plan (TFP) by food security status, 2000

Category	Median weekly food spending		
	Total[1]	Per person	Relative to TFP
		Dollars	
All households	99,383	37.50	1.36
Food security status:			
Food secure	88,627	40.00	1.41
Food insecure	10,562	27.50	1.04
Without hunger	7,408	28.00	1.06
With hunger	3,154	27.50	.98

[1]Total for all households excludes households that did not answer the questions about spending on food. These represent 6.6 percent of all households. Totals in the bottom section also exclude households that did not answer any of the questions in the food security scale.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Table 9—Weekly household food spending relative to the cost of the Thrifty Food Plan (TFP) by food security status and selected household characteristics, 2000

Category	Total[1]	Median weekly food spending relative to TFP			
		Food secure	Food insecure:		
			All	Without hunger	With hunger
	1,000	*Ratio*			
All households	99,189	1.41	1.04	1.06	0.98
Household composition:					
With children < 18	36,352	1.27	.99	1.01	.94
At least one child < 6	16,530	1.26	1.01	1.02	.94
Married-couple families	25,248	1.29	1.02	1.02	1.01
Female head, no spouse	8,578	1.20	.95	.97	.87
Male head, no spouse	1,974	1.22	1.05	1.02	NA
Other household with child[2]	552	1.29	NA	NA	NA
With no children < 18	62,838	1.50	1.14	1.18	1.04
More than one adult	37,646	1.42	1.06	1.11	.96
Women living alone	14,699	1.56	1.24	1.30	1.04
Men living alone	10,493	1.76	1.31	1.39	1.28
With elderly	22,395	1.30	.98	1.01	.98
Elderly living alone	8,896	1.30	1.14	1.14	NA
Race/ethnicity of households:					
White non-Hispanic	74,745	1.45	1.09	1.13	.99
Black non-Hispanic	11,746	1.21	1.00	1.02	.98
Hispanic[3]	8,925	1.27	.99	.99	.98
Other non-Hispanic	3,773	1.37	1.01	1.02	NA
Household income-to-poverty ratio:					
Under 1.00	11,483	1.05	.95	.96	.90
Under 1.30	16,706	1.08	.96	.98	.92
Under 1.85	24,601	1.11	.96	.98	.94
1.85 and over	60,658	1.54	1.32	1.32	1.31
Income unknown	13,931	1.33	.98	1.00	NA
Area of residence:					
Inside metropolitan area	79,713	1.46	1.08	1.12	1.01
In central city[4]	24,676	1.49	1.08	1.09	1.08
Not in central city[4]	40,854	1.48	1.10	1.14	.98
Outside metropolitan area	19,476	1.21	.96	.96	.89
Census geographic region:					
Northeast	18,503	1.45	1.02	1.03	.98
Midwest	23,599	1.33	1.03	1.04	1.02
South	35,333	1.37	1.01	1.04	.96
West	21,754	1.53	1.14	1.15	1.02

NA=Median not reported; fewer than 100 interviewed households in the category.

[1]Totals exclude households that did not answer the questions about spending on food. These represent 6.6 percent of all households.

[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

[3]Hispanics may be of any race.

[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Section 3. Use of Federal and Community Food Assistance Programs

Households with limited resources employ a variety of methods to help meet their food needs. Some participate in one or more of the Federal food assistance programs or obtain food from emergency food providers in their communities to supplement the food they purchase. Households that turn to Federal and community food assistance programs typically do so because they are having difficulty in meeting their food needs. The use of such programs by low-income households, and the relationship between their food security status and their use of food assistance programs, provides insight into the extent of their difficulties in obtaining enough food and the ways they cope with those difficulties.

This section presents information about the food security status and food expenditures of households that participated in the three largest Federal food programs and the two most common community food programs. (See box, "Federal and Community Food Assistance Programs.") It also provides information about the extent to which food-insecure households participated in these programs and about the characteristics of households that obtained food from community food pantries. Participation rates in the Federal food assistance programs and characteristics of participants in those programs are not described in this report. Extensive information on those topics is available from the USDA's Food and Nutrition Service.[15]

Methods

The September 2000 CPS food security survey included a number of questions about the use of Federal and community-based food assistance programs. All households with incomes below 185 percent of the Federal poverty threshold for their household were asked these questions. In order to minimize the burden on respondents, households with incomes above that range were not asked the questions unless they indicated some level of difficulty in meeting their food needs on preliminary screener questions. The questions about households use of food assistance programs that are analyzed in this section are:

- "During the past 12 months…did anyone in this household get food stamp benefits, that is, either food stamps or a food-stamp benefit card?" Households that responded affirmatively were then asked "In what month did your household last receive food stamp benefits?" If benefits were received in the month of the survey or the previous month, respondents were asked, "On what date did your household last receive your monthly food stamps?" Information from these three questions was combined to identify households that received food stamps in the 30 days prior to the survey.
- "During the past 30 days, did any children in the household…receive free or reduced-cost lunches at school?" (Only households with children between the ages of 5 and 18 were asked this question.)
- "During the past 30 days, did any women or children in this household get food through the WIC program?" (Only households with a child age 0-5 or a woman age 15-45 were asked this question.)
- "In the last 12 months, did you or other adults in your household ever get emergency food from a church, a food pantry, or food bank?" The use of these resources any time during the last 12 months is referred to in the discussion below as "food pantry use." Households that reported using a food pantry in the last 12 months were asked, "How often did this happen - almost every month, some months but not every month, or in only 1 or 2 months?" This information is used to estimate the average number of months in which households using food pantries obtained food from them. Households reporting that they did not use a food pantry in the last 12 months were asked, "Is there a church, food pantry, or food bank in your community where you could get emergency food if you needed it?"
- "In the last 12 months, did you or other adults in your household ever eat any meals at a soup kitchen?" The use of this resource is referred to as "use of an emergency kitchen" in the discussion that follows.

Prevalence rates of food security, food insecurity, and hunger, as well as median food expenditures relative to the cost of the Thrifty Food Plan, were calculated for households reporting use of each food assistance

[15]Information on Federal food and nutrition assistance programs, including participation rates and characteristics of participants, is available from the Office of Analysis, Nutrition, and Evaluation, Food and Nutrition Service Web site: http://www.fns.usda.gov/oane.

Federal and Community Food Assistance Programs

Federal Food Assistance Programs

USDA's Food and Nutrition Service (FNS) administers 15 domestic food and nutrition assistance programs. The three largest programs are as follows:

- The Food Stamp Program (FSP) provides benefits, through coupons or by electronic benefit transfer (EBT), to eligible low-income households. Clients qualify for the program based on available household income, assets, and certain basic expenses. Food stamps can be used to purchase food from eligible retailers. In an average month of fiscal year 2000, the FSP provided benefits to 17.2 million people in the United States, totaling almost $15 billion. The average benefit was $73 per person per month.
- The National School Lunch Program (NSLP) operates in more than 96,000 public and nonprofit private schools and residential child care institutions. All meals served under the program receive Federal subsidies, and free or reduced-price lunches are available to low-income students. In 2000, the program provided lunches to an average of 27 million children each school day. About 57 percent of the lunches served in 2000 were free or reduced-price.
- WIC (The Special Supplemental Nutrition Program for Women, Infants, and Children) is a Federally funded preventive nutrition program that provides grants to States to support distribution of supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, for infants in low-income families, and for children under 5 in low-income families who are found to be at nutritional risk. Most State WIC programs provide vouchers that participants use to acquire supplemental food packages at authorized food stores. In fiscal year 2000, WIC served an average 7.2 million participants per month with an average monthly benefit of $33 per person.

Community Food-Assistance Providers

Food pantries and emergency kitchens are the main direct providers of emergency food assistance. These agencies are locally based and rely heavily on volunteers. The majority of them are affiliated with faith-based organizations. (See Ohls et al., 2002, for more information.) Most of the food distributed by food pantries and emergency kitchens comes from local resources, but USDA supplements these resources through The Emergency Food Assistance Program (TEFAP). In 2000, TEFAP supplied 422 million pounds of commodities to community emergency food providers. Over half of all food pantries and emergency kitchens received TEFAP commodities in 2000, and these commodities accounted for about 12 percent of all food distributed by them (Ohls et al., 2002). Pantries and kitchens play different roles, as follows:

- Food pantries distribute unprepared foods for offsite use. An estimated 38,524 pantries operated in 2000 and distributed, on average, 281 million pounds of food per month. Households using food pantries received an average of 38.2 pounds of food per visit.
- Emergency kitchens (sometimes referred to as soup kitchens) provide individuals with prepared food to eat at the site. In 2000, an estimated 5,269 emergency kitchens served a total of 474,000 meals on an average day.

program or facility and for comparison groups of nonparticipating households with incomes and household compositions similar to those of program participants. To assure comparability, the participant households for which these statistics were calculated were limited to the same income ranges as the comparison groups.[16] The proportions of food-insecure households participating in each of the three largest Federal food assistance programs were calculated, as well as the proportion that participated in any of the three programs. These analyses were restricted to households with annual incomes below 185 percent of the poverty line because most households with incomes above this range were not asked whether they participated in these programs.

The numbers and proportions of households using food pantries and emergency kitchens were calculated at the national level, and the proportions using food pantries were calculated for selected categories of households. For these analyses, it is assumed that households did not use food pantries or emergency kitchens if they were screened out of these questions. Households that were screened out had incomes above 1.85 times the poverty line and gave no indication of food insecurity on either of two preliminary screener questions. Analysis (not shown) indicated that this assumption resulted in negligible bias to estimated participation rates.

Estimates of emergency kitchen use from the CPS food security surveys almost certainly understate the proportion of the population that actually uses these providers. The CPS selects households to interview from an address-based list and therefore interviews only persons who occupy housing units. People who are homeless at the time of the survey are not included in the sample, and those in tenuous housing arrangements (for instance, temporarily doubled up with another family) may also be missed. Exclusion of the homeless and underrepresentation of those who are tenuously housed bias estimates of emergency kitchen use downward, especially among certain subgroups of the population. This is much less true for food pantry users because they need cooking facilities to make use of items from a food pantry.[17] Therefore, only national-level statistics are presented on the use of emergency kitchens, while detailed analyses in this section focus primarily on the use of food pantries.

Finally, proportions were calculated of households participating in the three largest Federal food programs who also obtained food from food pantries and emergency kitchens. This analysis was restricted to households with annual incomes below 185 percent of the poverty line.

Data for all calculations were weighted using food security supplement weights. These weights, provided by the Census Bureau, are based on sampling probabilities and enable the interviewed households to statistically represent all households in the United States.

[16]Some program participants had reported annual incomes higher than the program eligibility criteria. They may have had incomes below the eligibility threshold during part of the year, or subfamilies within the household may have had incomes low enough to have been eligible.

[17]Previous studies of emergency kitchen users and food pantry users confirm these assumptions. A survey of clients of emergency food providers affiliated with America's Second Harvest found that more than one-fourth of emergency kitchen users were homeless, while this was true of less than 5 percent of food pantry users (America's Second Harvest, 1998, p. 118). A nationally representative survey, currently being conducted under an ERS contract, of people who use food pantries and emergency kitchens will provide a more complete and representative picture of this population, including the extent of homelessness among them.

Food Security and Food Spending of Households That Received Food Assistance

The relationship between food assistance program use and food security is complex. There are reasons to expect that households observed to be using food assistance programs in a one-time survey can either be more or less food secure than households not using food assistance. Since these programs provide food and other resources to reduce the risk of hunger, participating households can be expected to be more food secure. On the other hand, it is the more food-insecure households, having greater difficulty meeting their food needs, that seek assistance from the programs.[18] More than half of food stamp households, and nearly half of the households that received free or reduced-cost school lunches or WIC, were food insecure (table 10). The prevalence of hunger among households participating in these programs was about twice that of nonparticipating households in the same income ranges and with similar household composition. Almost three-fourths of households that obtained emergency food from community food pantries were food insecure, and more than one-third were food insecure with hunger. Rates of food insecurity and hunger were even higher for those who ate meals at emergency kitchens.

Households that received food assistance also spent substantially less for food than nonrecipient households (table 11).[19] Typical (median) food expenditures of households that received food stamps were 92 percent of the cost of the Thrifty Food Plan.[20] The corresponding statistics were 94 percent for households receiving free or reduced-price school lunches and 96 percent for households receiving WIC. Typical food expenditures for nonparticipating households in these income ranges were about 5 percent higher than the cost of the Thrifty Food Plan.

[18]This "self-targeting" effect is evident in the association between food security and food program participation that is observed in the food security survey. Participating households were less food secure than similar nonparticipating households. More complex analysis using methods to account for this self-targeting is required to assess the extent to which the programs improve food security (see especially Gundersen and Oliveira, 2001; Gundersen and Gruber, 2001; Nelson and Lurie, 1998).

[19]Food purchased with food stamps is included in household food spending as calculated here. However, the value of school lunches and food obtained with WIC vouchers is not included. Food from these sources supplemented the food purchased by many of these households.

[20]The maximum benefit for food stamp households is equal to the cost of the Thrifty Food Plan. About 20 percent of the FSP caseload receives the maximum benefit. Households with countable income receive less.

Table 10—Prevalence rates of food security, food insecurity, and hunger by participation in selected Federal and community food assistance programs, 2000

Category	Food secure	Food insecure: All	Without hunger	With hunger
		Percent		
Income less than 130 percent of poverty line:				
Received food stamps previous 30 days	48.2	51.8	32.6	19.3
Did not receive food stamps previous 30 days	71.3	28.7	19.7	9.1
Income less than 185 percent of poverty line; school-age children in household:				
Received free or reduced-price school lunch previous 30 days	54.3	45.7	34.2	11.6
Did not receive free or reduced-price school lunch previous 30 days	75.3	24.7	18.9	5.8
Income less than 185 percent of poverty line; children under age 5 in household:				
Received WIC previous 30 days	56.1	43.9	33.5	10.4
Did not receive WIC previous 30 days	72.1	27.9	21.7	6.1
Income less than 185 percent of poverty line:				
Received emergency food from food pantry previous 12 months	26.8	73.2	36.5	36.8
Did not receive emergency food from food pantry previous 12 months	79.3	20.7	15.3	5.4
Ate meal at emergency kitchen previous 12 months	23.8	76.2	29.4	46.8
Did not eat meal at emergency kitchen previous 12 months	76.2	23.8	16.6	7.2

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Table 11—Weekly household food spending relative to the cost of the Thrifty Food Plan (TFP) by participation in selected Federal and community food assistance programs, 2000

Category	Median weekly food spending relative to cost of the TFP
	Ratio
Income less than 130 percent of poverty line:	
Received food stamps previous 30 days	0.92
Did not receive food stamps previous 30 days	1.06
Income less than 185 percent of poverty line; school-age children in household:	
Received free or reduced-price school lunch previous 30 days	.94
Did not receive free or reduced-price school lunch previous 30 days	1.04
Income less than 185 percent of poverty line; children under age 5 in household:	
Received WIC previous 30 days	.96
Did not receive WIC previous 30 days	1.05
Income less than 185 percent of poverty line:	
Received emergency food from food pantry previous 12 months	.93
Did not receive emergency food from food pantry previous 12 months	1.12
Ate meal at emergency kitchen previous 12 months	.89
Did not eat meal at emergency kitchen previous 12 months	1.09

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Participation in Federal Food Assistance Programs by Food-Insecure Households

About half (50.4 percent) of food-insecure households (with or without hunger) received assistance from at least one of the three largest Federal food assistance programs during the month prior to the September 2000 food security survey (table 12). The largest share of food-insecure households was reached by the National School Lunch Program (31.9 percent), followed by the Food Stamp Program (23.0 percent) and the WIC program (14.2 percent).[21] The pattern of program participation by households classified as food insecure with hunger was similar to that of all food-insecure households except that the Food Stamp Program reached a somewhat larger share (27.4 percent) and the National School Lunch Program a smaller share (25.9 percent) of these more severely food-insecure households.

[21]These statistics may be biased downward somewhat. It is known from comparisons of administrative records and household survey data that food program participation is underreported by household survey respondents, including those in the CPS. This is probably true for food-insecure households as well, although the extent of underreporting by these households is not known. Statistics are based on the subsample of households with annual incomes below 185 percent of the poverty line. Not all these households were eligible for certain of the programs. (For example, those without pregnant women or children and with incomes above 130 percent of poverty would not have been eligible for any of the programs.)

Table 12—Participation of food-insecure households in selected Federal food assistance programs, 2000

Programs	Share of food-insecure households that participated in the program during the previous 30 days[1]	Share of food-insecure-with-hunger households that participated in the program during previous 30 days[1]
	Percent	
Food stamps	23.0	27.4
Free or reduced-price school lunch	31.9	25.9
WIC	14.2	11.3
Any of the three programs	50.4	46.8
None of the three programs	49.6	53.2

[1]Analysis is restricted to households with annual incomes less than 185 percent of the poverty line because most households with incomes above that range were not asked whether they participated in food assistance programs.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Use of Food Pantries and Emergency Kitchens—National Conditions and Trends

Some 2.5 million households (2.4 percent of all households) obtained food from food pantries one or more times during the 12-month period ending in September 2000 (table 13). A much smaller number—414,000 households (0.4 percent)—had members who ate one or more meals at an emergency kitchen. Households that obtained food from food pantries included 4.4 million adults and 3.1 million children.

The percentage of households using food pantries declined from 2.7 percent in 1996[22] to 2.5 percent in 1998 and 2.4 percent in 2000. The percentage of households using emergency kitchens changed only negligibly from 1996 to 2000, and the change was not statistically significant. In spite of the decline in the percentage of households using food pantries, total annual usage probably increased somewhat during the period because of increased frequency of visits and population growth. Households that used food pantries did so more frequently in 2000 than in 1998. (The 1996 CPS food security survey did not ask about frequency of food pantry use.) A larger proportion of users reported getting food from a food pantry "almost every month" in 2000 (22.5 percent) than in 1998 (21.1 percent). A larger proportion also reported getting food in "some months, but not every month" in 2000 (33.6 percent) than in 1998 (30.5 percent), while a smaller proportion reported getting food "only in 1 or 2 months" in 2000 (43.9 percent) than in 1998 (48.4 percent). The magnitude of these changes suggests that the increased frequency of use approximately offset the decline in the percentage of households that used food pantries. Population growth, the other offsetting factor, was about 4.1 percent from 1996 to 2000, so the *number* of visits to food pantries probably increased by about that increment during the 4-year period.[23]

[22]The observed prevalence of food pantry use in the 1996 CPS food security survey was 2.5 percent. However, adjusting for screening differences between the 1996 and 2000 surveys, it is estimated that the prevalence of food pantry use would have been 2.7 percent if the screening protocol used in 1998 and 2000 had been in effect in 1996.

[23]Other data sources indicate larger increases in the use of food pantries. A recent nationwide study of emergency food providers, which asked providers to report on their perceptions of changes in demand from 1997 to 2000, reported an increase in demand of 16.5 percent at food pantries and 12.2 percent at emergency kitchens over that period (Ohls et al., 2002). Data provided by the U.S. Conference of Mayors (2000) imply that requests for emergency food assistance increased by 82 percent from 1996 to 2000. However, this estimate included information from only about 25 cities each year, and the information was obtained from city officials rather than from a direct survey of emergency food providers. America's Second Harvest, a national network of food banks that represents almost 80 percent of food banks in the country, reported that the number of pounds of food distributed by its food banks to their member agencies increased by 16 percent from 1998 to 1999 (America's Second Harvest, 1999).

Table 13—Use of food pantries and emergency kitchens, 2000

Category	Pantries			Kitchens		
	Total[1]	Users		Total[1]	Users	
	1,000	*1,000*	*Percent*	*1,000*	*1,000*	*Percent*
All households	105,789	2,524	2.4	105,788	414	0.39
All persons in households	272,887	7,550	2.8	272,944	1,011	.37
Adults in households	201,440	4,423	2.2	201,461	721	.36
Children in households	71,446	3,127	4.4	71,482	290	.41
Food security status:						
Food secure	94,808	700	.7	94,801	140	.15
Food insecure	10,922	1,825	16.7	10,923	270	2.47
Without hunger	7,670	908	11.8	7,675	109	1.43
With hunger	3,252	917	28.2	3,248	160	4.93

[1]Totals exclude households that did not answer the question about food pantries or emergency kitchens. Totals in the bottom section also exclude households that did not answer any of the questions in the food security scale.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Use of Food Pantries and Emergency Kitchens, by Food Security Status

Use of food pantries and emergency kitchens was strongly associated with food insecurity. Food-insecure households were 24 times more likely than food-secure households to have obtained food from a food pantry, and 16 times more likely than food-secure households to have eaten a meal at an emergency kitchen. Furthermore, among food-insecure households, those registering hunger were more than twice as likely to have used a food pantry and three times as likely to have used an emergency kitchen as those that were food insecure without hunger.

The large majority of food-insecure households, and even of households that were food insecure with hunger, did not use a food pantry at any time during the previous year. In some cases, this was because there was no food pantry available or because the household believed there was none available. Among food-insecure households that did not use a food pantry, 33 percent reported that there was no such resource in their community, and an additional 20 percent said they did not know if there was. Nevertheless, even among food-insecure households that knew there was a food pantry in their community, only 30 percent availed themselves of it.

More than one-fourth of households that used food pantries and one-third of those that used emergency kitchens were classified as food secure. About half of these food-secure households did report some concerns or difficulties in obtaining enough food by responding positively to 1 or 2 of the 18 indicators of food insecurity. (A household must report occurrence of at least 3 of the indicators to be classified as food insecure; see appendix A). The proportions using food pantries and emergency kitchens were much higher among households that reported one or two indicators of food insecurity than among households that reported none—11 times as high for food pantry use and 8 times as high for use of emergency kitchens.

Use of Food Pantries, by Selected Household Characteristics

The use of food pantries varied considerably by household structure and by race and ethnicity (table 14). Households with children were twice as likely as those without children to use food pantries (3.6 percent compared with 1.7 percent). Food pantry use was especially high among female-headed households with children (8.6 percent), while use by married couples with children (1.8 percent) was essentially the same as that of households without children. Few households with elderly members used food pantries (1.5 percent). Use of food pantries was higher among Blacks (5.6 percent) and Hispanics (3.3 percent) than among non-Hispanic Whites (1.8 percent), consistent with the higher rates of poverty, food insecurity, and hunger of these minorities. In spite of their lower use rate, non-Hispanic Whites comprised a majority (56 percent) of food-pantry users.

Almost 13 percent of households with incomes below the poverty line received food from food pantries, compared with 0.5 percent of households with incomes above 1.85 percent of the poverty line.[24] Among households with incomes above the poverty line but below 1.85 times the poverty line, 521,000 used food pantries in 2000, comprising 21 percent of all households using food pantries and 3.8 percent of households in that income range.

Use of food pantries was higher in central cities (3.4 percent) and in nonmetropolitan areas (3.0 percent) than in metropolitan areas outside of central cities (1.5 percent). There was not a large regional variation in the use of food pantries, although use was somewhat more common in the West, where 2.7 percent of households used the pantries.

[24]Use of food pantries by households with incomes higher than 1.85 times the poverty line was probably slightly underreported by the CPS food security survey. Households in this income range were not asked the question about using a food pantry unless they had indicated some level of food stress on at least one of two preliminary screener questions. However, analysis of the use of food pantries by households at different income levels below 1.85 times the poverty line (and thus not affected by the screen) indicates that the screening had only a small effect on the estimate of food pantry use by households with incomes above that range.

Table 14—Use of food pantries by selected household characteristics, 2000

Category	Total[1]	Pantry users	
	1,000	*1,000*	*Percent*
All households	105,789	2,524	2.4
Household composition:			
With children < 18	37,963	1,350	3.6
At least one child < 6	17,186	703	4.1
Married-couple families	26,297	469	1.8
Female head, no spouse	9,004	774	8.6
Male head, no spouse	2,087	78	3.8
Other household with child[2]	575	27	4.7
With no children < 18	67,826	1,175	1.7
More than one adult	40,392	495	1.2
Women living alone	16,123	410	2.5
Men living alone	11,310	271	2.4
With elderly	24,869	373	1.5
Elderly living alone	10,094	188	1.9
Race/ethnicity of households:			
White non-Hispanic	79,560	1,406	1.8
Black non-Hispanic	12,751	715	5.6
Hispanic[3]	9,390	311	3.3
Other non-Hispanic	4,088	94	2.3
Household income-to-poverty ratio:			
Under 1.00	12,003	1,520	12.7
Under 1.30	17,461	1,832	10.5
Under 1.85	25,717	2,041	7.9
1.85 and over	63,217	285	.5
Income unknown	16,856	199	1.2
Area of residence:			
Inside metropolitan area	85,146	1,905	2.2
In central city[4]	26,458	867	3.4
Not in central city[4]	43,748	645	1.5
Outside metropolitan area	20,643	620	3.0
Census geographic region:			
Northeast	20,037	450	2.2
Midwest	25,246	620	2.5
South	37,554	831	2.2
West	22,952	624	2.7

[1]Totals exclude households that did not answer the question about getting food from a food pantry. These represent 0.5 percent of all households.
[2]Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.
[3]Hispanics may be of any race.
[4]Metropolitan area subtotals do not add to metropolitan area totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

Use of Food Pantries and Emergency Kitchens by Households Receiving Federal Food Assistance

Both Federal and community food assistance programs are important resources for low-income households. To design and manage these programs so that they function together effectively as a nutrition safety net, it is important to know how they complement and supplement each other. The extent to which households that participate in Federal food assistance programs also receive assistance from community food assistance programs provides information about these relationships.

About one-fourth (24.3 percent) of the households that received food stamps in the month prior to the survey also obtained food from a food pantry at some time during the year (table 15). These households comprised 39.6 percent of all households that reported using a food pantry. Food pantry use was somewhat less common among households that participated in the National School Lunch Program (14.3 percent) and the WIC Program (15.8 percent), reflecting the higher income-eligibility criteria of these programs. A sizeable majority of food pantry users (61.7 percent) received food from at least one of the three largest Federal food programs. The remainder of food pantry users (38.3 percent) did not participate in any of these Federal programs.

Only small proportions (from 1.0 to 2.2 percent) of households that participated in the three largest Federal food assistance programs reported eating at an emergency kitchen during the 12 months prior to the survey. Nevertheless, these households comprised a sizeable share of emergency kitchen users. Among households with incomes less than 185 percent of the poverty line who reported eating one or more meals at an emergency kitchen, 27.0 percent received food stamps, 19.5 percent received free or reduced-cost school lunches, 12.8 percent received WIC benefits, and 41.1 percent participated in at least one of these three programs. These statistics probably overstate the actual shares of emergency kitchen users who participate in the Federal food programs, however. The households most likely to be underrepresented in the food security survey—those homeless or tenuously housed—are also less likely to participate in the Federal food programs.

Table 15—Combined use of Federal and community food assistance programs by low-income households,[1] 2000

Category	Share of category that obtained food from food pantry	Share of food pantry users in category	Share of category that ate meal at emergency kitchen	Share of emergency kitchen users in category
		Percent		
Received food stamps previous 30 days	24.3	39.6	2.2	27.0
Received free or reduced-price school lunch previous 30 days	14.3	35.7	1.0	19.5
Received WIC previous 30 days	15.8	18.5	1.5	12.8
Participated in one or more of the three Federal programs	15.4	61.7	1.4	41.1
Did not participate in any of the three Federal programs	3.6	38.3	.7	58.9

[1]Analysis is restricted to households with annual incomes less than 185 percent of the poverty line because most households with incomes above that range were not asked whether they participated in food assistance programs.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

APPENDIX A. Household Responses to Questions in the Food Security Scale

The 18 questions from which the food security scale is calculated ask about conditions, experiences, and behaviors that characterize a wide range of severity of food insecurity and hunger. One way the differences are observed is the percentage of households that respond affirmatively to the various items. For example, the least severe item, *We worried that our food would run out before we got money to buy more*, was reported by 15.1 percent of households in 2000 (table A-1). *Adults cutting the size of meals or skipping meals because there wasn't enough money for food* was reported by 3.8 percent of households. The most severe item, *children not eating for a whole day because there wasn't enough money for food*, was reported by 0.2 percent of households with children. (See box on page 2 for the complete wording of these questions.)

The two least severe questions indicate uncertainty about having enough food and the experience of running out of food. The remaining 16 items indicate increasingly severe disruptions of normal eating patterns and reductions in food intake. Three or more affirmative responses are required for a household to be classified as food insecure, so all households with that classification affirmed at least one item indicating disruption of normal eating patterns or reduction in food intake. Most food-insecure households reported multiple indicators of these conditions (table A-2).

Most food-secure households (72.8 percent of all households with children and 86.1 percent of those without children) reported no problems or concerns in meeting their food needs. However, households that reported only one or two indications of food insecurity (11 percent of households with children and 6.5 percent of households without them) are also classified as food secure. Most of these households affirmed one or both of the first two items, indicating uncertainty about having enough food or about exhausting their food

Table A-1—Responses to items in the food security scale, 1998, 1999, and 2000[1]

Scale item[2]	Households affirming item[3]		
	1998	1999	2000
		Percent	
Household items:			
Worried food would run out before (I/we) got money to buy more	16.6	14.7	15.1
Food bought didn't last and (I/we) didn't have money to get more	13.3	12.2	12.2
Couldn't afford to eat balanced meals	10.9	9.5	9.9
Adult items:			
Adult(s) cut size of meals or skipped meals	6.6	5.2	5.4
Respondent ate less than felt he/she should	6.2	4.8	5.2
Adult(s) cut size or skipped meals in 3 or more months	4.5	3.6	3.8
Respondent hungry but didn't eat because couldn't afford	2.8	2.2	2.4
Respondent lost weight	1.7	1.2	1.5
Adult(s) did not eat for whole day	1.3	1.0	1.0
Adult(s) did not eat for whole day in 3 or more months	.9	.7	.7
Child items:			
Relied on few kinds of low-cost food to feed child(ren)	16.5	14.4	16.3
Couldn't feed child(ren) balanced meals	9.6	8.2	8.9
Child(ren) were not eating enough	5.0	4.7	4.7
Cut size of child(ren)'s meals	1.6	1.0	1.2
Child(ren) were hungry	1.2	.8	.8
Child(ren) skipped meals	.8	.5	.6
Child(ren) skipped meals in 3 or more months	.5	.4	.4
Child(ren) did not eat for whole day	.2	.1	.2

[1]Item response frequencies weighted to population totals.
[2]The actual wording of each item includes explicit reference to resource limitation, e.g., "…because (I was/we were) running out of money to buy food," or "…because there wasn't enough money for food."
[3]Households not responding to item are excluded from the denominator. Households without children are excluded from the denominator of child-referenced items.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

supply, but did not indicate actual disruptions of normal eating patterns or reductions in food intake. Although these households are classified as food secure, the food security of some of them may have been tenuous at times, especially in the sense that they lacked "*assured* ability to acquire acceptable foods in socially acceptable ways," a condition that the Life Sciences Research Office includes in its definition of food insecurity (Anderson, 1990, p. 1598). Further research is underway on the characteristics and conditions of this least severe range measured by the food security scale, evidenced by households affirming just one or two food insecurity indicators.

Table A-2—Percentage of households by food security raw score, 2000

Panel A: Households with children

Raw score (number of food security questions affirmed)	Percent of households[1]	Cumulative percent of households[1]	Food security status
0	72.83	72.83	
1	6.46	79.29	Food secure
2	4.60	83.89	
3	3.65	87.54	
4	2.94	90.48	
5	2.55	93.03	Food insecure without hunger
6	2.13	95.15	
7	1.01	96.17	
8	1.02	97.18	
9	.64	97.82	
10	.78	98.60	
11	.50	99.10	
12	.29	99.39	
13	.24	99.62	Food insecure with hunger
14	.14	99.76	
15	.09	99.85	
16	.05	99.90	
17	.07	99.98	
18	.02	100.00	

Panel B: Households with no children

Raw score (number of food security questions affirmed)	Percent of households	Cumulative percent of households	Food security status
0	86.14	86.14	
1	3.59	89.73	Food secure
2	2.94	92.67	
3	2.52	95.19	
4	1.04	96.23	Food insecure without hunger
5	1.09	97.32	
6	1.04	98.36	
7	.67	99.03	
8	.41	99.44	Food insecure with hunger
9	.24	99.68	
10	.32	100.00	

[1]Survey response frequencies weighted to population totals.

Source: Calculated by ERS using data from the September 2000 Current Population Survey Food Security Supplement.

APPENDIX B. Background on the U.S. Food Security Measurement Project

This report of household food security in 2000 is the latest in a series of reports on *Measuring Food Security in the United States.* Previous reports in the series are:

- *Household Food Security in the United States in 1995: Summary Report of the Food Security Measurement Project* (Hamilton et al., 1997a)
- *Household Food Security in the United States in 1995: Technical Report* (Hamilton et al., 1997b)
- *Household Food Security in the United States, 1995-1998: Advance Report* (Bickel et al., 1999)
- *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999)
- *Guide to Measuring Household Food Security, Revised 2000* (Bickel et al., 2000)
- *Household Food Security in the United States, 1999* (Andrews et al., 2000)

The series was inaugurated in September 1997 with the three-volume report, *Household Food Security in the United States in 1995* (Hamilton et al., 1997a and 1997b; Price et al., 1997). The advance report of findings for 1995-98 (Bickel, Carlson, and Nord, 1999) was released in July 1999, and a report detailing hunger and food insecurity prevalence by State for the 1996-98 period (Nord, Jemison, and Bickel, 1999) was released in September 1999. A summary report of findings for 1999 was released in the fall of 2000 (Andrews et al., 2000) and a detailed statistical report for 1995-97 in 2001 (Ohls et al, 2001). Detailed statistical and technical reports for 1998-99 are planned for release later in 2002 (Cohen et al., forthcoming).

The estimates contained in all of these reports are based on a direct survey measure developed over several years by the U.S. Food Security Measurement Project, an ongoing collaboration among Federal agencies, academic researchers, and both commercial and nonprofit private organizations (Carlson et al., 1999; Olson, 1999.) The measure was developed in response to the National Nutrition Monitoring and Related Research Act of 1990. The Ten-Year Comprehensive Plan developed under the Act specified the following task:

> *Recommend 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 NNMRR Program and at State and local levels.*[25]

Beginning in 1992, USDA staff reviewed the existing research literature, focusing on the conceptual basis for measuring the severity of food insecurity and hunger and on the practical problems of developing a survey instrument for use in sample surveys at national, State, and local levels.

In January 1994, USDA's Food and Nutrition Service (FNS) joined with the U.S. Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics (NCHS), in sponsoring a National Conference on Food Security Measurement and Research. This meeting brought together leading academic experts and other private researchers and key staff of the concerned Federal agencies. The conference identified the consensus among researchers in the field as to the strongest conceptual basis for a national measure of food insecurity and hunger. It also led to a working agreement about the best method for implementing such a measure in national surveys (USDA, 1995).

After extensive cognitive assessment, field testing, and analysis by the U.S. Census Bureau, a food security survey questionnaire was fielded by the bureau as a supplement to the Current Population Survey (CPS) of April 1995.[26] The CPS food security survey was repeated in September 1996, April 1997, August 1998, April 1999, and September 2000. Minor modifications to the questionnaire format and screening procedures

[25]Task V-C-2.4, U.S. Department of Health and Human Services and U.S. Department of Agriculture: Ten-Year Comprehensive Plan for the National Nutrition Monitoring and Related Research Program. Federal Register 1993, 58:32 752-806.

[26]The Current Population Survey (CPS) is a representative national sample of approximately 50,000 households conducted monthly by the U.S. Census Bureau for the U.S. Department of Labor, Bureau of Labor Statistics. Its primary purpose is to monitor labor force participation and employment in the United States and each of the 50 States. Various Federal agencies sponsor collection of specialized supplementary data by the CPS following the labor-force interview. The CPS food security survey has been conducted annually since 1995 as one such CPS supplement, sponsored by USDA. Beginning in 2001, ongoing collection is planned for early December of each year.

were made over the first several years, and a more substantial revision in screening and format, designed to reduce respondent burden and improve data quality, was introduced with the August 1998 survey. However, the content of the 18 questions upon which the U.S. Food Security Scale is based remained constant in all years.

Initial analysis of the 1995 data was undertaken by Abt Associates, Inc., through a cooperative venture with FNS, the interagency working group, and other key researchers involved in developing the questionnaire.

The Abt team used nonlinear factor analysis and other state-of-the-art scaling methods to produce a measurement scale for the severity of deprivation in basic food needs, as experienced by U.S. households. Extensive testing was carried out to establish the validity and reliability of the scale and its applicability across various household types in the broad national sample (Hamilton et al., 1997a, 1997b).[27]

Following collection of the September 1996 and April 1997 CPS food security data, FNS awarded a second research contract to Mathematica Policy Research, Inc. (MPR) to reproduce independently the results from the 1995 CPS food security data, to estimate hunger and food insecurity prevalence for 1996 and 1997, and to assess the stability and robustness of the measurement model when applied to the separate datasets. The MPR findings, which will be presented in full in a final report (Ohls et al., 2001), establish the stability of the food security measure over the 1995-97 period. That is, the relative severity of the items were found to be nearly invariant across years and across major population groups and household types.

In 1998, USDA's Economic Research Service (ERS) assumed sponsorship of the Census Bureau's annual CPS food security data collection for USDA. ERS and IQ Solutions, working under a contract awarded by ERS, have analyzed the 1998 and 1999 data, applying and refining the procedures developed and established for USDA in the Abt and MPR research. These analyses, which will be presented along with detailed statistics for 1998 and 1999 in subsequent reports (Cohen et al., forthcoming), found continuing stability of the measure in those 2 years.

A large number of independent researchers in the academic and nutrition communities also have used the U.S. food security survey module and food security scale to assess the severity and prevalence of food insecurity in various population groups. One general result of these studies has been to verify the consistency of the measurement construct and the robustness of the measurement method in diverse populations and survey contexts. A summary list of many of these studies is available from the Brandeis University Center on Hunger and Poverty (www.centeronhunger.org).

Nonetheless, the following caveats need to be kept in mind when interpreting the prevalence estimates in this report:

- The Current Population Survey, which carries the food security survey as a supplement, is representative of the noninstitutionalized population of the United States. It is based on a complete address list of sampled areas (counties and metropolitan areas), but does not include homeless persons who are not in shelters. This may result in an underestimate of the number of more severely food-insecure persons.
- Case study and ethnographic research suggests that some parents are reluctant to report inadequate food intake for their children even when it has occurred (Hamilton et al., 1997b, p. 88). This may result in an underestimate of the prevalence of children's hunger based on food security survey data.
- Small, random measurement errors, combined with the nature of the distribution of households across the range of severity of food insecurity, may result in a modest overestimate of food insecurity and hunger. False positives (the incorrect classification of food secure households as food insecure) are more likely than false negatives because there are more households just above the food insecurity threshold than in a similar range just below it. The same is true at the hunger threshold (Hamilton et al., 1997a, p. 65; Hamilton et al., 1997b, p. 89).

[27]The food security scale reported here is based on the Rasch measurement model, an application of maximum likelihood estimation in the family of Item Response Theory models (Wright, 1977, 1983). These statistical measurement models were developed in educational testing, where test items vary systematically in difficulty and the overall score measures the level of difficulty that the tested individual has mastered. In the present application, the severity of food insecurity recently experienced by household members is analogous to the level of test difficulty that an individual has mastered.

APPENDIX C. USDA's Thrifty Food Plan

The Thrifty Food Plan—developed by USDA—serves as a national standard for a nutritious diet at low cost. It represents a set of "market baskets" of food that people of specific age and gender could consume at home to maintain a healthful diet that meets current dietary standards, taking into account the food consumption patterns of U.S. households. The cost of the meal plan for each age-gender category is calculated based on average national food prices adjusted for inflation. The cost of the market basket for a household is further adjusted by household size to account for economies of scale. The cost of the Thrifty Food Plan is used in section 2 to adjust household spending on food so that spending can be compared meaningfully among households of different sizes and age-gender compositions. It provides a baseline that takes into account differences in household food needs due to these differences in household composition. This appendix provides background information on the Thrifty Food Plan and details of how it is calculated for each household.

In 1961, USDA developed four cost-specific, nutritionally balanced food plans: Economy, Low-cost, Moderate-cost, and Liberal. The food plans were developed by studying the food purchasing patterns of households in the United States and modifying these choices by the least amount necessary to meet nutritional guidelines at specific cost objectives. The Economy Food Plan, and the Thrifty Food Plan that replaced it at the same designated cost level in 1975, have been used for a number of important policy and statistical purposes over the years. In the 1960s, a low-income threshold based on the Economy Food Plan was adopted as the official poverty threshold of the United States (National Research Council, 1995, p. 110). The cost of the Thrifty Food Plan is used by USDA's Food and Nutrition Service as a basis for determining families' maximum food stamp allotments.[28]

The Thrifty Food Plan was most recently revised by USDA's Center for Nutrition Policy and Promotion (CNPP) in 1999. This was done to reflect updated dietary recommendations and food composition data and current food prices and consumption patterns, while maintaining the cost at the level of the previous market baskets (Center for Nutrition Policy and Promotion, 1999). CNPP updates the cost of each of USDA's four food plans monthly to reflect changes in food prices, as measured by the Consumer Price Index for specific food categories. Table C-1 lists estimated weekly costs of the four USDA food plans for the month of September 2000—the month the 2000 CPS food security survey was conducted.

The cost of the Thrifty Food Plan was calculated for each household in the food security survey, based on the information in table C-1, and was used as a baseline for comparing food expenditures across different types of households in section 2. The food plan costs in table C-1 are given for individuals in the context of four-person families. For households that are larger or smaller than four persons, the costs must be adjusted for economies of scale, as specified in the first footnote of table C-1. For example, the weekly Thrifty Food Plan cost for a household composed of a married couple with no children, ages 29 (husband) and 30 (wife), is given by adding the individual Thrifty Food Plan costs for the husband ($28.70) and wife ($26.10) and adjusting the total ($54.80) upward by 10 percent. The resulting total ($60.30) represents the cost of the Thrifty Food Plan for this type of household.

[28]The Thrifty Food Plan was revised several times over the years (with major changes in 1983 and 1999) in order to take into account new information about nutritional needs, nutritional values of foods, food consumption preferences, and food prices (Kerr et al., 1984). In these revisions, USDA gave attention both to cost-containment—keeping the cost of the Thrifty Food Plan near the food stamp benefit level—and to the buying patterns of households (Citro and Michael, 1995, pp. 111).

Table C-1—Weekly cost of USDA food plans: cost of food at home at four levels, September 2000

Age-gender group[1]	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
		Dollars		
Child:				
1 year[2]	15.90	19.50	22.90	27.80
2 years	15.80	19.50	22.90	27.80
3-5 years	17.20	21.40	26.50	31.80
6-8 years	21.30	28.50	35.50	41.30
9-11 years	25.30	32.30	41.30	47.80
Male:				
12-14 years	26.10	36.50	45.30	53.20
15-19 years	26.90	37.60	46.90	54.10
20-50 years	28.70	37.30	46.60	56.50
51 years and over	26.10	35.60	43.80	52.60
Female:				
12-19 years	26.10	31.40	38.20	46.20
20-50 years	26.10	32.70	39.80	51.10
51 years and over	25.60	31.80	39.50	47.30
Examples of Families				
1. Couple: 20-50 years	60.30	77.00	95.00	118.40
2. Couple, 20-50 years, and 2 children, 2 and 3-5 years	87.80	110.90	135.80	167.20

[1]The costs given are for individuals in 4-person families. For individuals in other-size families, the following adjustments are suggested: 1-person - add 20 percent; 2-person - add 10 percent; 3-person - add 5 percent; 5- or 6-person - subtract 5 percent; 7- (or more) person - subtract 10 percent.
[2]USDA does not have official food plan cost estimates for children less than 1-year old. Since the Thrifty Food Plan identifies the most economical sources of food, in this analysis we assume a food plan based on breastfeeding. We arbitrarily set the cost of feeding a child under 1-year at half the cost of feeding a 1-year old child, in order to account for the added food intake of mothers and other costs associated with breastfeeding. While this estimate is rather arbitrary, it affects only 2.5 percent of households in our analysis.

Source: USDA, Center for Nutrition Policy and Promotion, http://www.cnpp.usda.gov/using3.htm.

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