

# Household Food Security in the United States, 1999

Margaret Andrews, Mark Nord,  
Gary Bickel, Steven Carlson

## Introduction

Nearly 90 percent of all U.S. households, 240 million Americans, were food secure during the 12 months ending in April 1999, according to preliminary data. "Food secure" means they had assured access, at all times, to enough food for an active, healthy life. The remaining 10.1 percent of U.S. households, 31 million Americans, were food insecure, meaning that at some time during the previous year they were uncertain of having, or unable to acquire, adequate food sufficient to meet basic needs at all times due to inadequate household resources for food. Of these, about 3 million households were food insecure to the extent that one or more household members were hungry due to inadequate resources at least some time during the year.

This report presents the most recent available information on the changing level of food security among U.S. households over the period 1995-99 and estimates of the extent of hunger and food insecurity in 1999. While these data are subject to revision as independent analyses and reviews are completed, they are being released to provide timely information on the current food security status of the U.S. population.

The incidence of food insecurity and hunger in the United States has declined significantly since food security data were first collected in 1995. The number of food-insecure households fell by 12 percent between 1995 and 1999. The prevalence of hunger fell even more sharply. The number of households where at least one member was hungry because of insufficient resources in the previous 12 months fell by 24 percent between 1995 and 1999.<sup>1</sup> Substantial decreases

in food insecurity and hunger were observed, over this period, for all household types. However, even though there were fewer food-insecure households with incomes between 50 and 130 percent of the poverty line in 1999, a higher proportion of households in this income range were food insecure in 1999 than in 1995.

## Method

The preliminary results presented in this report are based on data collected in the Food Security Supplements to the Current Population Survey (CPS) for the years 1995-1999. The report provides an update to its predecessor in this series, *Household Food Security in the United States, 1995-1998: Advance Report* (Bickel, Carlson, and Nord, 1999), released in July 1999 by USDA's Food and Nutrition Service. Briefly, the measurement method uses responses to a series of questions about conditions and behaviors known to characterize households having difficulty meeting basic food needs.<sup>2</sup> 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.<sup>3</sup> (Response frequencies for the

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declined by somewhat larger amounts: 16 percent for the food insecure and 28 percent for those with hunger.

<sup>2</sup>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.) Further details on the development of the measure are provided in Appendix B.

<sup>3</sup>Voluntary fasting or dieting to lose weight are thereby excluded from the measure.

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<sup>1</sup>After adjusting for population growth, the proportions of households classified as food insecure or with hunger

## Examples of Questions from the 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?

18 items used to classify households are provided in Appendix A. Full-question wordings are presented in Hamilton et al., 1997a, Price et al., 1997, and Bickel et al., 2000.) Each respondent household is 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. Appropriate weighting factors are then applied to the surveyed households to make nationally representative prevalence estimates.

Due to changes in the administration of the Food Security Supplement in the initial years of data collection, statistics presented in this report are based on two different data-editing protocols. One protocol adjusts the data so that prevalence estimates are consistent across all years, as well as comparable with the same adjusted data series reported in *Household Food Security in the United States, 1995-1998: Advance Report*. This provides the most accurate picture of trends in the prevalence of food insecurity and hunger over the past 5 years. The second data-editing protocol makes full use of all households’ responses and makes no adjustments for cross-year comparability. Thus, it provides the most accurate picture of the current prevalence of food insecurity and hunger.

The adjustments required for cross-year comparability result in understating the prevalence of food insecurity. For example, the best estimate of food-insecurity prevalence in 1999, using the unadjusted data, is 10.1 percent (table 2), while the estimate adjusted for cross-year comparability (table 1) is 8.7 percent. The estimated prevalence of hunger, the more severe measure, is less affected by the screening change. The unadjusted estimate for 1999 is 3.0 percent, compared with an estimated prevalence of 2.8 percent, based on the data adjusted for comparability.

For future data collections, continued use of the 1998/1999 survey administration procedures is anticipated. Thus, food-security and hunger prevalence statistics based on the unadjusted data will be directly comparable from 1998 onward. The present report provides the bridging comparison, with table 1 and appendix table C-1 being comparable to earlier years and table 2, table 3, and appendix table C-2 being comparable for 1998, 1999, and future years.<sup>4</sup>

## Trends in Prevalence of Food Insecurity and Hunger

*Prevalence estimates presented in this section are based on data from the 1995-1999 surveys adjusted for cross-year comparability due to differences in survey administration in 1995-1997.*

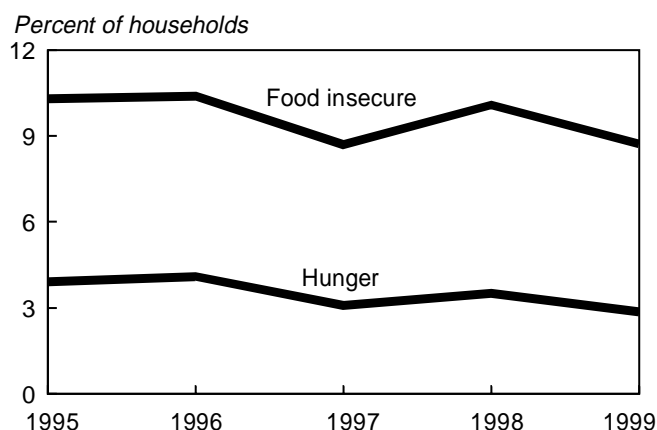
Figure 1 shows the pattern of change in the prevalence of food insecurity and hunger between 1995 and 1999.<sup>5</sup> In general, food insecurity and hunger declined over the period with year-to-year deviations from trend. However, the slight upturn in 1996 and the more sizable increase in 1998 warrant further study. One possibility is that the data are subject to a seasonal influence, as food-security data collection occurs in April in odd-numbered years and August or September in even years.

<sup>4</sup>Further details of the adjustments for cross-year comparability and differences in survey administration underlying them are discussed in Appendix C.

<sup>5</sup>The similar appendix figure C-1 in appendix C shows a comparison between prevalence estimates based on the common screen in each year and prevalence estimates based on the unadjusted data.

Figure 1

### Prevalence of food insecurity and hunger in U.S. households, 1995-99



Source: Calculated by ERS based on Current Population Survey Food Security Supplements of April 1995, August 1996, April 1997, September 1998, and April 1999. Data are adjusted for cross-year comparability.

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

(Adjusted for cross-year comparability)

Category	Total*	Food secure		Food insecure:					
		1,000	Percent	All		Without hunger		With hunger	
		1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
<b>Households</b>									
1995	100,445	90,097	89.7	10,348	10.3	6,402	6.4	3,946	3.9
1996	101,508	90,964	89.6	10,544	10.4	6,407	6.3	4,137	4.1
1997	102,373	93,459	91.3	8,914	8.7	5,760	5.6	3,154	3.1
1998	103,480	92,972	89.8	10,509	10.2	6,820	6.6	3,689	3.6
1999	104,816	95,664	91.3	9,152	8.7	6,166	5.9	2,987	2.8
<b>All persons in households</b>									
1995	261,342	230,910	88.4	30,431	11.6	19,742	7.6	10,689	4.1
1996	264,780	233,221	88.1	31,559	11.9	20,119	7.6	11,440	4.3
1997	266,128	240,009	90.2	26,120	9.8	18,045	6.8	8,075	3.0
1998	268,886	237,721	88.4	31,165	11.6	21,771	8.1	9,394	3.5
1999	270,609	243,652	90.0	26,957	10.0	19,441	7.2	7,515	2.8
<b>Adults in households</b>									
1995	191,063	172,862	90.5	18,200	9.5	11,611	6.1	6,589	3.4
1996	193,608	175,003	90.4	18,606	9.6	11,582	6.0	7,024	3.6
1997	195,180	179,420	91.9	15,761	8.1	10,601	5.4	5,160	2.6
1998	197,423	178,631	90.5	18,792	9.5	12,657	6.4	6,135	3.1
1999	199,116	182,793	91.8	16,323	8.2	11,447	5.8	4,875	2.4
<b>Children in households</b>									
1995	70,279	58,048	82.6	12,231	17.4	8,131	11.6	4,100	5.8
1996	71,172	58,218	81.8	12,953	18.2	8,537	12.0	4,416	6.2
1997	70,948	60,589	85.4	10,359	14.6	7,444	10.5	2,915	4.1
1998	71,463	59,090	82.7	12,373	17.3	9,114	12.8	3,259	4.6
1999	71,493	60,859	85.1	10,634	14.9	7,994	11.2	2,640	3.7

\* —See Notes to tables, page 9

The declines in food insecurity and hunger from 1998 to 1999 were in the opposite direction of the changes observed from 1997 to 1998 (table 1). While food-insecure households accounted for 8.7 percent of households in the 1997 and 1999 data (as adjusted), this proportion had risen to 10.2 percent (adjusted) in 1998. A similar change occurred in the proportion of households that were food insecure with hunger. In 1998 the proportion of households experiencing hunger rose 0.5 percentage point above the 1997 rate, but in 1999 fell 0.8 percentage point to the lowest level (2.8 percent, adjusted) since these data have been collected.

Between 1995, when food security was first measured at the national level, and 1999, the incidence of food insecurity declined for nearly all household types (fig. 2).<sup>6</sup> Large percentage decreases were observed for female-headed households with children, Hispanic households, households living in central cities, and households in the Midwest. However, for households with income between 50 and 130 percent of the poverty line, the percentage of households experiencing food insecurity increased, even though there were 715,000 fewer food-insecure households in this category in 1999 than in 1995. For households with income above 185 percent of the poverty line, the percentage experiencing food insecurity was unchanged.

For most household types, the declines in hunger prevalence between 1995 and 1999 were similar to the declines in food insecurity (fig. 3). However, among low-income households, the prevalence of hunger declined even as the prevalence of food insecurity increased. In other words, while the overall prevalence of food insecurity rose for households with incomes below 130 percent of the poverty line in this period, the average severity of that food insecurity declined. The distribution within this group shifted away from the more severe range (food insecure with hunger) to the less severe range (food insecure without hunger).

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<sup>6</sup>The prevalence rates represented in figures 2 and 3 were adjusted for comparability across years. The adjusted prevalence rates for 1995 are found in Bickel, Carlson, and Nord, 1999. Those for 1999 are provided in appendix table C-1.

## Prevalence of Food Insecurity and Hunger in 1999

*Prevalence estimates presented in this section are based on the unadjusted data from the 1999 survey. Although they cannot be compared with 1995-1997 estimates, they are comparable to unadjusted 1998 statistics presented in Appendix C and with planned future data collections.*

The prevalence of food insecurity and hunger varied considerably among household types (table 2). As in previous years, some groups experienced rates of food insecurity greater than the national average:

- 36.7 percent of households with incomes below the official poverty line (\$16,895 for a family of four in 1999),
- 29.7 percent of households with children headed by a single woman,
- 21.2 percent of black households,
- 20.8 percent of Hispanic households.

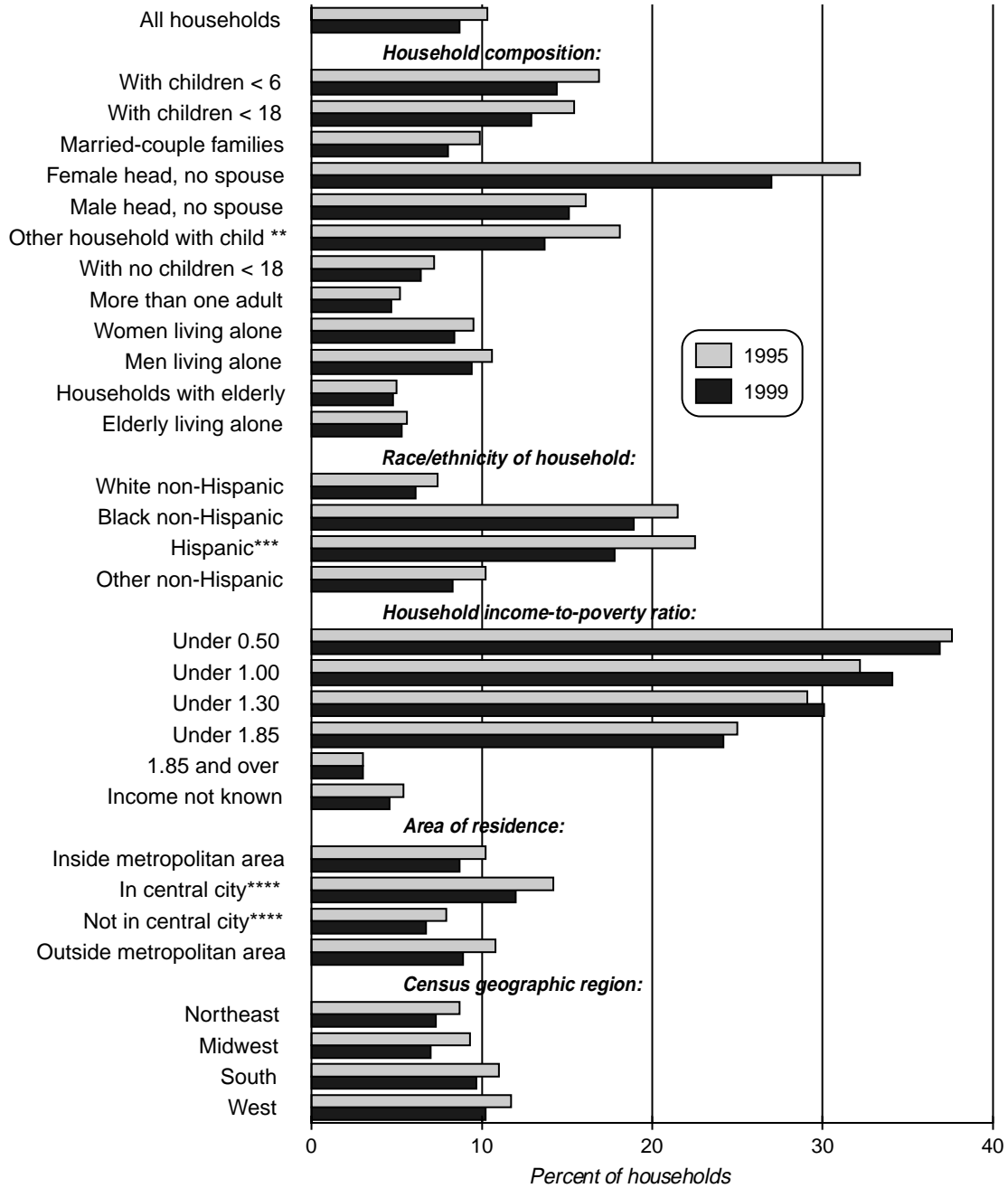
Overall, households with children experienced food insecurity at double the rate for households without children (14.8 versus 7.4 percent). Among households with children, those with married-couple families showed a lower rate of food insecurity (9.6 percent) than the national average (10.1 percent) for all households.

In terms of individuals, about 31 million persons lived in food-insecure households, with 12 million (39 percent) of them being children (table 2). In addition, some 5 million adults and 2.7 million children lived in households where someone in the household had experienced hunger in the previous year due to inadequate resources.

The prevalence of food insecurity for households located in central cities (13.8 percent) and nonmetro areas (10.1 percent) substantially exceeded that of households in suburbs and other metropolitan areas outside central cities (7.7 percent). Regionally, the food-insecurity rate was above the national rate in the South and West (11.1 and 11.8 percent, respectively) and below the national rate in the Midwest and Northeast (8.3 percent in both cases).

Hunger prevalence varies with household characteristics in a pattern similar to that observed for food insecurity. Hunger prevalence is much higher than average among families headed by a single woman (8.1 per-

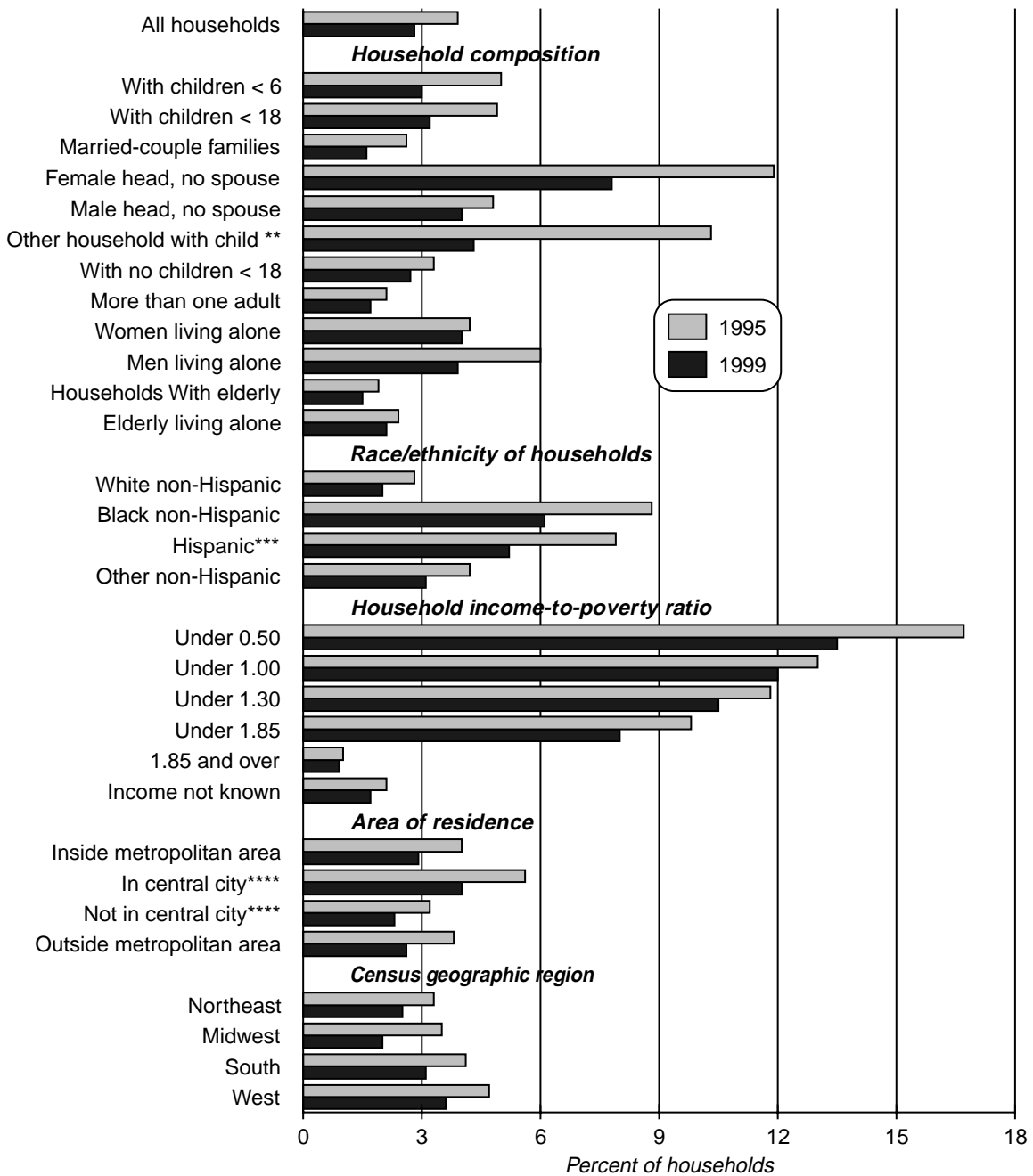
Figure 2  
**Prevalence of food insecurity, with or without hunger, 1995 versus 1999**



\*\* , \*\*\*, \*\*\*\* -- See notes to tables, page 9.

Calculated by ERS based on data from Current Population Survey Food Security Supplements as of April 1995 and April 1999, adjusted for cross-year comparability.

Figure 3  
**Prevalence of hunger, 1995 versus 1999**



\*\* , \*\*\* , \*\*\*\* -- See notes to tables, page 9.

Source: Calculated by ERS based on data from Current Population Survey Food Security Supplements of April 1995 and April 1999, adjusted for cross-year comparability.

**Table 2--1999: Prevalence of food security, food insecurity, and hunger by selected characteristics of households**

(Based on unadjusted data)

Category	Total*	Food secure		Food insecure:					
		1,000	Percent	All	Without hunger		With hunger		
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
<b>All households</b>	104,684	94,154	89.9	10,529	10.1	7,420	7.1	3,109	3.0
All persons in households	270,318	239,304	88.5	31,015	11.5	23,237	8.6	7,779	2.9
Adults in households	198,900	179,960	90.5	18,941	9.5	13,869	7.0	5,072	2.5
Children in households	71,418	59,344	83.1	12,074	16.9	9,368	13.1	2,707	3.8
<b>Household composition:</b>									
With children < 6	17,231	14,439	83.8	2,792	16.2	2,265	13.1	527	3.1
With children < 18	37,884	32,290	85.2	5,594	14.8	4,340	11.5	1,254	3.3
Married couple families	26,303	23,771	90.4	2,532	9.6	2,105	8.0	428	1.6
Female head, no spouse	8,744	6,146	70.3	2,598	29.7	1,890	21.6	709	8.1
Male head, no spouse	2,187	1,817	83.1	370	16.9	280	12.8	89	4.1
Other household with child**	650	556	85.6	94	14.4	66	10.1	28	4.3
With no children < 18	66,800	61,865	92.6	4,935	7.4	3,080	4.6	1,855	2.8
More than one adult	39,568	37,380	94.5	2,188	5.5	1,470	3.7	718	1.8
Women living alone	16,046	14,473	90.2	1,573	9.8	908	5.7	665	4.1
Men living alone	11,187	10,013	89.5	1,174	10.5	701	6.3	473	4.2
Households with elderly	24,704	23,265	94.2	1,439	5.8	1,055	4.3	385	1.6
Elderly living alone	10,049	9,413	93.7	636	6.3	423	4.2	214	2.1
<b>Race/ethnicity of households:</b>									
White non-Hispanic	78,998	73,451	93.0	5,546	7.0	3,873	4.9	1,673	2.1
Black non-Hispanic	12,616	9,936	78.8	2,680	21.2	1,866	14.8	814	6.4
Hispanic***	9,192	7,285	79.2	1,907	20.8	1,406	15.3	502	5.5
Other non-Hispanic	3,878	3,482	89.8	396	10.2	275	7.1	121	3.1
<b>Household income-to-poverty ratio:</b>									
Under 0.50	4,563	2,774	60.8	1,789	39.2	1,164	25.5	625	13.7
Under 1.00	11,319	7,169	63.3	4,150	36.7	2,767	24.5	1,383	12.2
Under 1.30	17,432	11,799	67.7	5,633	32.3	3,767	21.6	1,866	10.7
Under 1.85	27,261	20,145	73.9	7,116	26.1	4,907	18.0	2,210	8.1
1.85 and Over	63,909	61,299	95.9	2,610	4.1	1,969	3.1	641	1.0
Income Not Known	13,513	12,710	94.1	803	5.9	545	4.0	258	1.9
<b>Area of residence:</b>									
Inside metropolitan area	84,304	75,844	90.0	8,460	10.0	5,903	7.0	2,558	3.0
In central city****	26,718	23,027	86.2	3,691	13.8	2,578	9.6	1,113	4.2
Not in central city****	43,103	39,793	92.3	3,310	7.7	2,290	5.3	1,020	2.4
Outside metropolitan area	20,379	18,311	89.9	2,069	10.1	1,517	7.4	552	2.7
<b>Census geographic region:</b>									
Northeast	19,960	18,301	91.7	1,659	8.3	1,147	5.7	512	2.6
Midwest	24,592	22,554	91.7	2,038	8.3	1,514	6.2	524	2.1
South	37,598	33,431	88.9	4,166	11.1	2,945	7.8	1,221	3.3
West	22,533	19,868	88.2	2,665	11.8	1,813	8.0	852	3.8

\*, \*\*, \*\*\*, \*\*\*\* —See notes to tables, page 9.

cent), black and Hispanic households (6.4 and 5.5 percent, respectively), and households below the poverty line (12.2 percent). Geographically, hunger is more common in central-city households (4.2 percent) and in those in the South and West (3.3 and 3.8 percent, respectively).

Hunger rates below the national average were observed in households with elderly (1.6 percent), married-couple families with children (1.6 percent), multiple-adult households with no children (1.8 percent), white non-Hispanic households generally (2.1 percent), and households at or above 185 percent of the poverty line (1.0 percent).

## Prevalence of Food Insecurity and Hunger in Low-Income Households

*Prevalence estimates presented in this section are based on the unadjusted data from the 1999 survey.*

Food insecurity and hunger are conditions that result from insufficient household resources. Food insecurity is six times as prevalent, and hunger eight times as prevalent, in households with annual income below 185 percent of the poverty line as in households with income above that line (table 2). However, many factors that might affect a household's food security (e.g., job loss, divorce, or other unexpected events) are not captured by an annual income measure. A few households experience episodes of food insecurity, or even hunger, even though their annual income is well above the poverty line. On the other hand, many low-income households (including almost two-thirds of those with income below the official poverty line) manage to remain food secure.

Table 3 presents food security and hunger statistics for households with annual incomes below 130 percent of the poverty line. About one-third of these low-income households were food insecure, and in 10.7 percent of those households, people were hungry at times during the year. Low-income households with children were more vulnerable to food insecurity than were households without children (40.3 percent versus 26.1 percent), and 42 percent of children in low-income households lived in food-insecure households. The prevalence of hunger, however, was slightly lower in low-income households with children than in those without children. Low-income single mothers with children were especially vulnerable; 44.3 percent of these households were food insecure, and in 12.9 percent of

them, members were hungry at times during the year because of lack of money or other resources for food.

## Caveats

The preliminary findings presented in this report are based on application of a consistent methodology to the five data sets for 1995-1999. Analysis of all these data sets is still in progress for presentation in subsequent reports. These ongoing analyses may produce further refinements to the prevalence estimates for these years, or in their form of presentation. Consequently, final estimates may differ in minor detail from those presented in the present report.

The measure of children in food-insecure households with hunger is not, as such, a valid estimate of the number of children directly experiencing hunger, but an upper bound for this figure. In most households, children are shielded from food deprivation until the level of deprivation among adult members is quite severe. Work is currently under way to develop a more accurate estimate of children's hunger.

Other sources of possible estimation bias in the prevalence estimates include: the omission of homeless persons from the CPS household-based sample, a probable underreporting bias of unknown size, and a potential over-estimation bias resulting from the highly skewed distribution of households across the range of severity measured by the scale.



**Table 3--1999: Prevalence of food security, food insecurity, and hunger in households with income below 130 percent of the poverty line, by selected characteristics of households**

(Based on unadjusted data)

Category	Total*	Food secure		Food insecure:					
				All		Without hunger		With hunger	
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
<b>All low-income households</b>	17,432	11,799	67.7	5,633	32.3	3,767	21.6	1,866	10.7
Persons in low-income households	47,159	30,283	64.2	16,876	35.8	12,064	25.6	4,812	10.2
Adults in low-income households	29,684	20,073	67.6	9,611	32.4	6,686	22.5	2,925	9.9
Children in low-income households	17,475	10,210	58.4	7,265	41.6	5,378	30.8	1,888	10.8
<b>Household composition:</b>									
With children < 6	4,070	2,475	60.8	1,595	39.2	1,234	30.3	361	8.9
With children < 18	7,583	4,525	59.7	3,058	40.3	2,278	30.0	780	10.3
Married couple families	3,022	1,919	63.5	1,103	36.5	880	29.1	223	7.4
Female head, no spouse	3,896	2,172	55.7	1,724	44.3	1,224	31.4	500	12.9
Male head, no spouse	515	329	64.0	185	36.0	146	28.3	40	7.7
Other household with child**	150	105	70.1	45	29.9	28	18.5	17	11.4
With no children < 18	9,849	7,274	73.9	2,575	26.1	1,489	15.1	1,086	11.0
More than one adult	3,780	2,878	76.2	902	23.8	534	14.1	367	9.7
Women living alone	3,953	2,963	75.0	990	25.0	561	14.2	429	10.9
Men living alone	2,116	1,433	67.7	683	32.3	394	18.6	289	13.7
Households with elderly	4,299	3,518	81.8	781	18.2	527	12.3	255	5.9
Elderly living alone	2,577	2,147	83.3	431	16.7	266	10.3	165	6.4
<b>Race/ethnicity of households:</b>									
White non-Hispanic	9,352	6,855	73.3	2,496	26.7	1,607	17.2	889	9.5
Black non-Hispanic	4,082	2,435	59.6	1,648	40.4	1,112	27.2	535	13.1
Hispanic***	3,221	1,974	61.3	1,247	38.7	900	27.9	347	10.8
Other non-Hispanic	776	535	68.9	242	31.1	147	18.9	95	12.2
<b>Area of residence:</b>									
Inside metropolitan area	12,978	8,602	66.3	4,376	33.7	2,902	22.4	1,473	11.3
In central city****	5,824	3,677	63.1	2,147	36.9	1,439	24.7	708	12.2
Not in central city****	4,536	3,097	68.3	1,438	31.7	956	21.1	482	10.6
Outside metropolitan area	4,454	3,197	71.8	1,257	28.2	864	19.4	393	8.8
<b>Census geographic region:</b>									
Northeast	2,756	1,939	70.3	817	29.7	540	19.6	277	10.1
Midwest	3,386	2,399	70.8	988	29.2	674	19.9	314	9.3
South	7,390	4,966	67.2	2,424	32.8	1,666	22.5	758	10.3
West	3,899	2,496	64.0	1,403	36.0	887	22.7	517	13.3

**Notes to tables**

\* Total households in each category exclude households whose food security status is unknown. These households did not give a valid response to any of the questions in the food security scale, and they gave no indication of food security on preliminary screening questions. In 1999 these households represented 348,000 households (0.3 percent of all households). However, some of these households were screened out and deemed food secure under the common screen, reducing the missing households in table 1 to 216,000 (0.2 percent of all households) and raising the number of households with valid responses to 104,816,000.

\*\* Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or border.

\*\*\* Hispanics may be of any race.

\*\*\*\* Subtotals do not add to metropolitan totals because central-city residence is not identified for about 17 percent of households in metropolitan statistical areas.