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Household Food Security in the United States in 2023

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Household Food Security in the United States in 2023

Matthew P. Rabbitt, Madeline Reed-Jones, Laura J. Hales, and Michael P. Burke

Abstract

This report provides statistics on food security in U.S. households throughout 2023 based on the Current Population Survey Food Security Supplement data collected by the U.S. Department of Commerce, Bureau of the Census, in December 2023. An estimated 86.5 percent of U.S. households were food secure throughout the entire year in 2023, with access at all times to enough food for an active, healthy life for all household members. The remaining households (13.5 percent, statistically significantly higher than the 12.8 percent in 2022) were food insecure at least some time during the year. Very low food security is the more severe range of food insecurity where one or more household members experience reduced food intake and disrupted eating patterns at times during the year because of limited money or other resources for food. In 2023, 5.1 percent of households were very low food secure, an estimate that is statistically similar to the 5.1 percent in 2022. Children and adults were food insecure at times during 2023 in 8.9 percent of U.S. households with children, statistically similar to the 8.8 percent in 2022. In 2023, very low food security among children was 1.0 percent, statistically similar to the 1.0 percent in 2022 and 0.7 percent in 2021. In 2023, the typical food-secure household spent 16 percent more on food than the typical food-insecure household of the same size and household composition. About 58 percent of food-insecure households participated in one or more of the three largest Federal nutrition assistance programs from the U.S. Department of Agriculture's Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and the National School Lunch Program during the month before the 2023 survey.

Keywords: food security, food insecurity, food sufficiency, food insufficiency, food spending, food pantry, soup kitchen, emergency kitchen, free groceries, free meal, material well-being, material hardship, Supplemental Nutrition Assistance Program, SNAP, National School Lunch Program, NSLP, Special Supplemental Nutrition Program for Women, Infants, and Children, WIC

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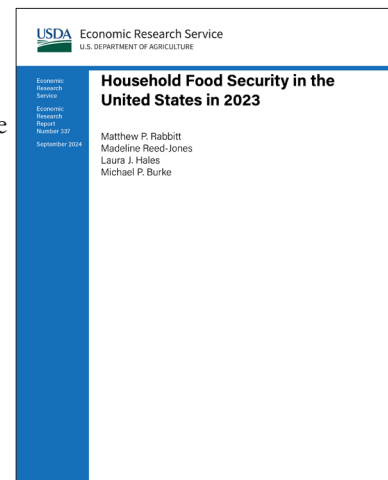


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What Is the Issue?

Most U.S. households have consistent, dependable access to enough food for active, healthy living, meaning, they are food secure. However, some households experience food insecurity at times during the year, meaning their ability to acquire adequate food is limited by a lack of money and other resources. The U.S. Department of Agriculture's (USDA) food and nutrition assistance programs aim to increase food security by providing low-income households access to food for a healthful diet, as well as nutrition education. USDA monitors the extent and severity of food insecurity in U.S. households through an annual, nationally representative survey sponsored and analyzed by USDA's Economic Research Service (ERS). This report presents statistics from the survey that cover household food security, food expenditures, and the use of Federal food and nutrition assistance programs in 2023. The prevalence of food insecurity is determined by many factors, including household circumstances, the economy, and Federal, State, and local policies. This report does not provide an analysis of the factors that determine the prevalence or trends in food insecurity.



What Did the Study Find?

- In 2023, 86.5 percent of U.S. households were food secure. The remaining 13.5 percent (18.0 million households) were food insecure. Food-insecure households (those with low and very low food security) had difficulty at some time during the year providing enough food for all their members because of a lack of resources. The 2023 prevalence of food insecurity was statistically significantly higher than the 12.8 percent recorded in 2022 (17.0 million households), 10.2 percent in 2021 (13.5 million households) and the 10.5 percent in 2020 (13.8 million households).
- In 2023, 5.1 percent of U.S. households (6.8 million households) had very low food security, not statistically different from the 5.1 percent (6.8 million households) in 2022, but statistically significantly higher than the 3.8 percent (5.1 million households) in 2021 and the 3.9 percent (5.1 million households) in 2020. In this more severe range of food insecurity, the food intake of some household members was reduced, and normal eating patterns were disrupted at times during the year because of limited resources.

Findings for households with children:

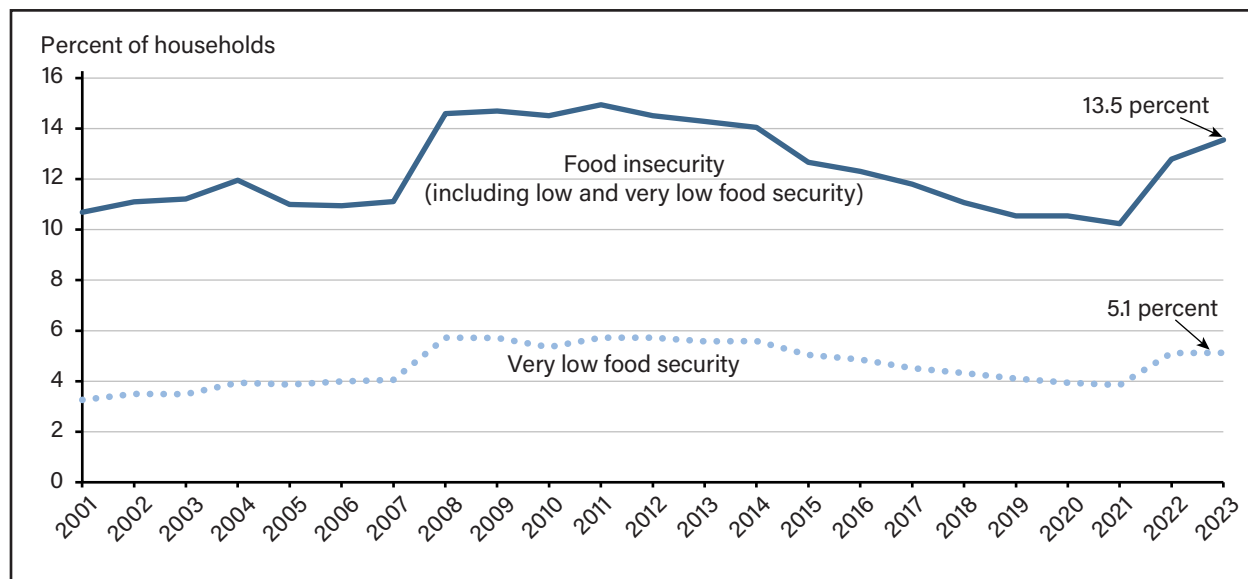
- Children were food insecure at times during 2023 in 8.9 percent of U.S. households with children (3.2 million households), statistically similar to the 8.8 percent (3.3 million households) in 2022, but up from both 6.2 percent (2.3 million households) in 2021 and 7.6 percent (2.9 million households) in 2020. These households with food insecurity among children were unable at times to provide adequate, nutritious food for their children.

- Children are usually shielded from the disrupted eating patterns and reduced food intake that characterize very low food security. However, in 2023, children, along with adults, experienced instances of very low food security in 1.0 percent of households with children (374,000 households), statistically similar to the 1.0 percent (381,000 households) in 2022 and the 0.7 percent (274,000 households) in 2021. These households with very low food security among children reported that children were hungry, skipped a meal, or did not eat for a whole day because there was not enough money for food.

How Was the Study Conducted?

Data for the USDA, ERS food security reports came from an annual survey conducted by the U.S. Department of Commerce, Bureau of the Census as the December supplement to the monthly Current Population Survey. USDA, ERS sponsored the annual Food Security Supplement (FSS) and compiled and analyzed the responses. The 2023 FSS included 30,863 households, which comprised a representative sample of the U.S. civilian population of about 133 million households. The FSS asked one adult respondent per household about experiences and behaviors that indicate food insecurity during calendar year 2023, such as being unable to afford balanced meals, cutting the size of meals, or being hungry because of too little money for food. The food security status of the household was assigned based on the number of food-insecure conditions reported.

Prevalence of food insecurity in 2023 increased from 2022



Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements data.

Household Food Security in the United States in 2023

Introduction

Since 1995, the U.S. Department of Agriculture (USDA) has collected information annually on food access and adequacy, food spending, and sources of food assistance for the U.S. population. The information is collected in an annual survey, the Food Security Supplement (FSS), conducted by the U.S. Department of Commerce, Bureau of the Census (Census Bureau), as a supplement to the nationally representative Current Population Survey (CPS).¹ A major impetus for this data collection has been to provide information about the prevalence and severity of food insecurity in U.S. households. Annual monitoring of food security contributes to the effective operation of Federal food and nutrition assistance programs, as well as private food assistance programs and other government initiatives aimed at reducing food insecurity. Previous reports in the series are available on the USDA, Economic Research Service (ERS) website.

This report updates national statistics on food security in calendar year 2023, household food spending, and the use of Federal food and nutrition assistance by food-insecure households. It uses data collected in the December 2023 Current Population Survey Food Security Supplement (CPS-FSS), the 29th annual survey in the Nation's food security monitoring system. Additional statistics (including the prevalence of food insecurity during the 30 days before the food security survey by household characteristics, the frequency of food-insecure conditions, and the use of Federal and community nutrition assistance) are available in the Statistical Supplement to this report (Rabbitt et al., 2024).

Statistics in this report reflect household experiences of food hardship, or food insecurity, throughout 2023. The prevalence of food insecurity is determined by many factors, including the economy (such as inflation and prices); Federal, State, and local policies; and household circumstances. This report does not provide an analysis of possible causal explanations for the prevalence of or trends in food insecurity.

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. This section provides information on food security and food insecurity in U.S. households throughout 2023.

¹ See Coleman-Jensen (2015) for the history of the food security measurement project and the development of food security measures.

Methods

Statistics presented in this report are based on data collected in the Food Security Supplement (FSS) to the CPS conducted in December 2023.² ³ The CPS includes about 50,000 households each year and is representative of the civilian, noninstitutionalized population of the United States at State and national levels.⁴ In December 2023, 41,772 households completed the monthly CPS, and of those, 30,863 households completed the FSS, and the remaining households were unable or unwilling to do so.⁵ Therefore, in 2023, 73.9 percent (30,863 households) of households that completed the monthly December CPS also completed the FSS, and 26.1 percent of households that responded to the monthly December CPS did not complete the FSS.⁶ The Census Bureau calculates survey sample weights annually for the FSS to indicate how many households were represented by each household that responded to the survey. The reweighting of the FSS considers income and other information about households that completed the labor-force portion of the monthly CPS survey but not the FSS. This corrects, to some extent, biases that could result from nonresponse to the FSS by households that completed only the labor-force part of the survey. All statistics in this report were calculated by applying the FSS weights to responses by the surveyed households, so the statistics are nationally representative.

Unless otherwise noted, statistical differences described in this report are statistically significant at the 90-percent confidence level, the level of confidence recommended by the Census Bureau to determine statistical validity based on the sampling design of the CPS. Standard errors of estimates were calculated using balanced repeated replication (BRR) methods based on replicate weights computed for the CPS-FSS by the Census Bureau.⁷ Statistical significance depends both on the size of the difference of the estimates and the precision of the estimates (or the size of the standard error of the estimates). Standard errors can vary across population subgroups. This

² Beginning in 2022 and continuing in 2023, updates and modifications were made to the Current Population Survey Food Security Supplement's (CPS-FSS) survey instrument. The full survey instrument had not been reviewed and evaluated with cognitive testing since it was first developed in the early 1990s. As USDA, ERS approached 25 years of food security data collection, researchers worked with the U.S. Department of Commerce, Bureau of the Census (Census Bureau) and USDA's Food and Nutrition Service to review the CPS-FSS survey content, make revisions, and conduct cognitive interviews to ensure the data collected continued to be relevant, current, and useful. Split-panel test data were collected as a supplement to the September 2020 Current Population Survey to assess differences in data collected from the standard instrument and the modified test instrument that resulted from the review and cognitive testing (Coleman-Jensen & Rabbitt, 2023). The underlying methodology for the food security measure and methods was unchanged. Overall, statistics from prior years are comparable with 2022 and 2023 statistics except for the questions about the receipt of free groceries and free meals from charitable organizations, which were revised substantially. Therefore, statistics from those survey questions are not comparable to previous statistics on the use of food pantries and emergency kitchens (Coleman-Jensen & Rabbitt, 2023). See Rabbitt et al. (2023) for a detailed discussion of the modifications to question wording and order in the box titled, "Revisions to the 2022 Food Security Supplement Survey Instrument" on page 2.

³ The food security survey was conducted December 10–19, 2023. Respondents are reminded in the survey to answer about their food situation "in the last 12 months, since December of last year."

⁴ Food security statistics for the active duty military population were monitored using the Status of Forces Survey of Active Duty Members, U.S. Department of Defense. For more information on active duty military food security, see Rabbitt and Beymer (2024).

⁵ In 2022 and 2023, response rates for the monthly Current Population Survey (CPS) were down from previous years. This is believed to be a continuing effect of the 2019 Coronavirus (COVID-19) pandemic on data collection. The U.S. Department of Labor, Bureau of Labor Statistics reported that the CPS response rate for December 2023 was 69.3 percent, up from the low of 65.0 percent in June 2020 but down from the average response rate of 83.0 percent for the 12 months ending February 2020 (U.S. Department of Labor, U.S. Bureau of Labor Statistics, 2024).

⁶ Supplement nonresponse was higher in 2023 (26.1 percent) than in 2022 (23.6 percent) but lower than 2021 (29.4 percent) and similar to 2020 (24.2 percent). At USDA, Economic Research Service's request, the U.S. Department of Commerce, Bureau of the Census has conducted nonresponse bias analyses of FSS data collections for several years, including 2020, 2021 and 2022. Those studies have shown that the distributions of respondents and nonrespondents differ on some demographic characteristics, with the largest differences in response rates for age and race of reference person, region, and income. However, those distributional differences do not necessarily indicate a nonresponse bias problem, and weighting adjustment may minimize the impact of any differences (Farnham, 2017; Hoop et al., 2022a; Hoop et al., 2022b; Hoop & Zhang, 2023).

⁷ For years before 2011, standard errors of national estimates used a design factor of 1.6 based on the complex Current Population Survey (CPS) sample design. State-level estimates from 2010 to present used replicated weights computed for the CPS Food Security Supplement. Before 2010, standard errors of State-level estimates were calculated using jackknife replication methods with "month in sample" groups considered as separate independent samples. Standard errors of all State-level estimates in this report are available from the authors by request.

report uses the phrase “essentially unchanged,” “statistically similar” or “not statistically significantly different” to describe differences between estimates of a statistic for 2 years that were not statistically significant at the 90-percent confidence level.

The methods used to measure the extent and severity of food insecurity here are described in detail in several studies (Hamilton et al., 1997a, 1997b; Andrews et al., 1998; Bickel et al., 1998; Carlson et al., 1999; Bickel et al., 2000; Nord & Bickel, 2002). See also the assessment of the measurement methods by a panel of the Committee on National Statistics (National Research Council, 2006).⁸ Household food security statistics presented here were based on a measure of food security calculated from responses to a series of questions about conditions and behaviors that characterize households when they have difficulty meeting basic food needs. Each question asked whether the condition or behavior occurred at any time during the previous 12 months and specified the reason as a lack of money and other resources to obtain food. Voluntary fasting and dieting to lose weight are thereby excluded from the measure. The series included three questions about the household’s food conditions as a whole and seven questions about the food conditions of adults in the household. If children were present, an additional eight questions about their food conditions were included (see box, “Questions Used To Assess the Food Security of Households in the CPS Food Security Supplement,” page 4).⁹

Responses to the 18 food security questions are reported in tables S-5 and S-6 of the Statistical Supplement (Rabbitt et al., 2024). The number of food-insecure conditions and behaviors the household reports determined the food security status of each interviewed household.¹⁰ Households were classified as food secure if they reported no food-insecure conditions or only one or two food-insecure conditions. Food-insecure conditions are indicated by responses of “often” or “sometimes” to questions 1–3 and 11–13; “almost every month” or “some months but not every month” to questions 5, 10, and 17; and “yes” to the other questions. Respondent households were classified as food insecure if they reported three or more food-insecure conditions (based on questions 1–10 for households without children and questions 1–18 for households with children). Households were classified as having food insecurity among children or food-insecure children if they report two or more food-insecure conditions among the children in response to questions 11–18.¹¹

⁸ Further details on the development of the measure are provided on the USDA, Economic Research Service website.

⁹ An official Spanish translation of the food security questions is used in the survey and available on the USDA, Economic Research Service (ERS) website. USDA, ERS assessed the effect of interview language on Hispanic respondents versus non-Hispanic White respondents and found no differences in the statistical properties of the food security measure (Rabbitt & Coleman-Jensen, 2017).

¹⁰ Analyses have been conducted to examine possible measurement error in the food security module. Findings show that overall model-data fit is quite good, and most households have expected response patterns and strong model fit. For a small number of households, unexpected response patterns result in poor model fit that may reflect misreporting (Engelhard et al., 2018). A related potential source of error is the underreporting of items. Analyses have found evidence of underreporting of more severe food-insecure conditions but no evidence of overreporting of food-insecure conditions (Gregory, 2020).

¹¹ Both qualitative and quantitative research studies suggested that parents’ reports of their children’s food insecurity sometimes differed from adolescents’ self-reported food insecurity and that parents were sometimes unaware of the degree to which children reduced their own food intake because of household food insecurity (Fram et al., 2011; Nord & Hanson, 2012). The extent to which underreporting of children’s food insecurity may exist is unknown (Coleman-Jensen et al. (2013), discussed research on parent- and self-reported food insecurity among children). A comprehensive review of diet quality and food security found evidence that adults shield children from food insecurity (Hanson & Connor, 2014).

Questions Used to Assess the Food Security of Households in the Current Population Survey Food Security Supplement

1. “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?
2. “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?
3. “We couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
4. 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? (Yes/No)
5. (If yes to question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn’t eat, because there wasn’t enough money for food? (Yes/No)
8. In the last 12 months, did you lose weight because there wasn’t enough money for food? (Yes/No)
9. In the last 12 months, did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)
10. (If yes to question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

(Questions 11–18 were only asked if the household included children ages 0–17)

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn’t feed our children a balanced meal, because we couldn’t afford that.” Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because there wasn’t enough money for food.” Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food? (Yes/No)
15. In the last 12 months, were the children ever hungry because there wasn’t enough money for food? (Yes/No)
16. In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food? (Yes/No)
17. (If yes to question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

continued on next page ►

Questions Used to Assess the Food Security of Households in the Current Population Survey Food Security Supplement

18. 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? (Yes/No)

Coding of Responses

Questions 1–3 and 11–13 are coded as affirmative (i.e., possibly indicating food insecurity) if the response is “often” or “sometimes.” Questions 5, 10, and 17 are coded as affirmative if the response is “almost every month” or “some months but not every month.” The remaining questions are coded as affirmative if the response is “yes.”

Assessing Food Security Status in Households Without Children

Households without children are classified as food insecure if they report 3 or more indications of food insecurity in response to the first 10 questions; they are classified as having very low food security if they report 6 or more food-insecure conditions out of the first 10 questions.

Assessing Food Security Status in Households with Children Ages 0–17

Households with children are classified as food insecure if they report 3 or more indications of food insecurity in response to the entire set of 18 questions; they are classified as having very low food security if they report 8 or more food-insecure conditions in response to the entire set of 18 questions.

The food security status of children in the household is assessed by responses to the child-referenced questions (questions 11–18). Households reporting two or more of these conditions are classified as having food insecurity among children. Households reporting five or more are classified as having very low food security among children.

Food-insecure households are further classified as having either low food security or very low food security.¹² The very low food security category identifies households in which the food intake of one or more members was reduced and eating patterns disrupted because of insufficient money and other resources for food (see box, “What Is Very Low Food Security?” on page 7). Households without children were classified as having very low food security if they reported six or more food-insecure conditions (based on questions 1–10). Households with children aged 0–17 were classified as having very low food security if they reported eight or more food-insecure conditions among adults and/or children (based on questions 1–18).¹³ They were further classified as having very low food security among children if they reported five or more food-insecure conditions among the children (that is, if they responded affirmatively to five or more of questions 11–18).

Low and very low food security differ in the extent and character of the adjustments the household makes to its eating patterns and food intake. Households classified as having low food security reported multiple indications of food acquisition problems and reduced diet quality but typically reported fewer, if any, indications of

¹² Before 2006, households with low food security were described as “food insecure without hunger,” and households with very low food security were described as “food insecure with hunger.” Changes in these descriptions were made in 2006 at the recommendation of the Committee on National Statistics (National Research Council, 2006) to distinguish the physiological state of hunger from indicators of food availability. The criteria by which households were classified remained unchanged.

¹³ Implications of differences in raw score thresholds for very low food security between households with and without children are discussed in Nord and Coleman-Jensen (2014), Coleman-Jensen et al. (2017), and Rabbitt et al. (2021).

reduced food intake. Those classified as having very low food security reported multiple indications of reduced food intake and disrupted eating patterns because of inadequate resources for food. In most households with very low food security, the survey respondent responded “yes” that they were hungry at some time during the year but did not eat because there was not enough money for food.

To reduce the survey burden on higher income respondents, households with incomes above 185 percent of the Federal poverty line that do not indicate food-access or food-acquisition problems on either of the two preliminary screening questions were deemed to be food secure and are not asked the questions in the food security assessment series. The lead-in to the preliminary screening questions specifies:

“The next questions are about the food eaten in your household in the last 12 months, since December of last year, and whether you were able to afford the food you need.”

The first preliminary screening question asked of all households is as follows:

“In the last 12 months, since December of last year, did you ever run short of money and try to make your food or your food money go further?” (Yes/No)

In 2023, 22.7 percent of households responded “yes,” and 77.3 percent responded “no.” A response of “no” is indicative of no food-access problems.

The second preliminary screener question (commonly referred to as the food-sufficiency question) reads:

“Which of these statements best describes the food eaten in your household—enough of the kinds of food we want to eat, enough but not always the kinds of food we want to eat, sometimes not enough to eat, or often not enough to eat?”

In 2023, 76.0 percent of respondents responded, “enough of the kinds of food we want to eat,” 19.3 percent said, “enough but not always the kinds of food we want to eat,” 3.7 percent indicated “sometimes not enough to eat,” and 0.9 percent reported “often not enough to eat.” A response of only “enough of the kinds of food we want to eat” is indicative of no food-access problems.

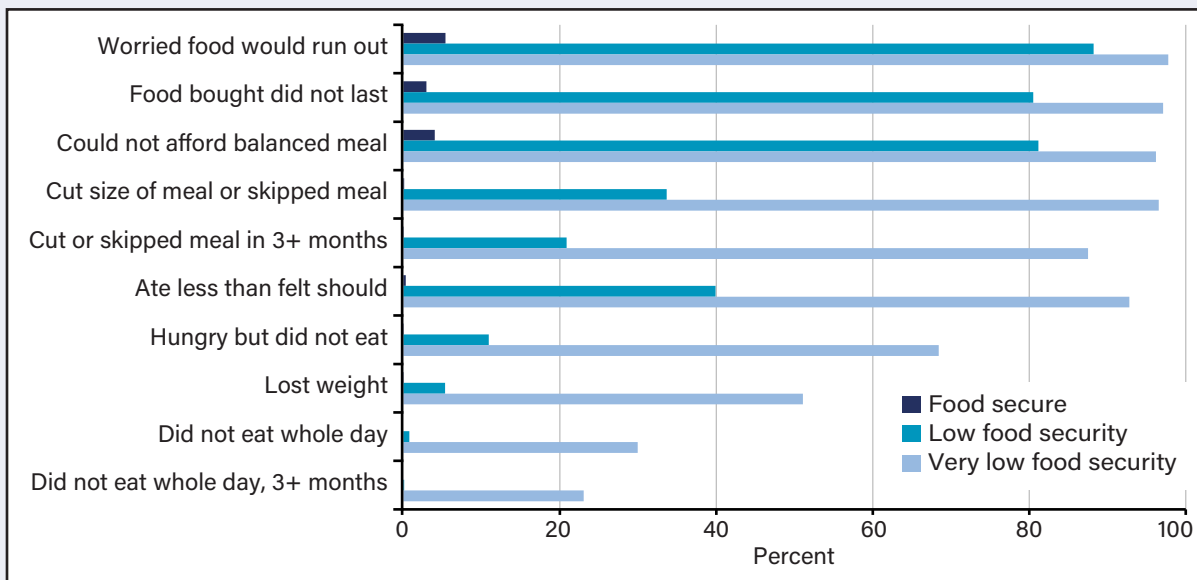
What Is Very Low Food Security?

Very low food security can be characterized in terms of the conditions that households in this category reported in the food security survey. Households without children classified as having very low food security reported six or more food-insecure conditions, and households with children reported eight or more food-insecure conditions, including conditions among adults and children. Thus, the conditions reported by respondents reflect the definition of very low food security. At times during the year, the food intake of household members was reduced, and their normal eating patterns were disrupted because the household lacked money and other resources for food. In the 2023 survey, households classified as having very low food security (representing an estimated 6.8 million households nationwide) reported the following specific conditions:

- 98 percent reported having worried that their food would run out before they got money to buy more.
- 97 percent reported that the food they bought just did not last, and they did not have money to get more.
- 96 percent reported that they could not afford to eat balanced meals.
- 97 percent reported that an adult had cut the size of meals or skipped meals because there was not enough money for food; 88 percent reported that this had occurred in 3 or more months.
- 93 percent reported that they had eaten less than they felt they should because there was not enough money for food.
- 68 percent reported that they had been hungry but did not eat because they could not afford enough food.
- 51 percent reported having lost weight because they did not have enough money for food.
- 30 percent reported that an adult did not eat for a whole day because there was not enough money for food; 23 percent reported that this had occurred in 3 or more months.

All households without children classified as having very low food security reported at least six of these conditions. Most households without children with very low food security (69 percent) reported seven or more food-insecure conditions. Conditions reported by households with children were like those without children, but the reported food-insecure conditions of both adults and children were considered.

Percentage of U.S. households reporting each indicator of food insecurity, by food security status, 2023



Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

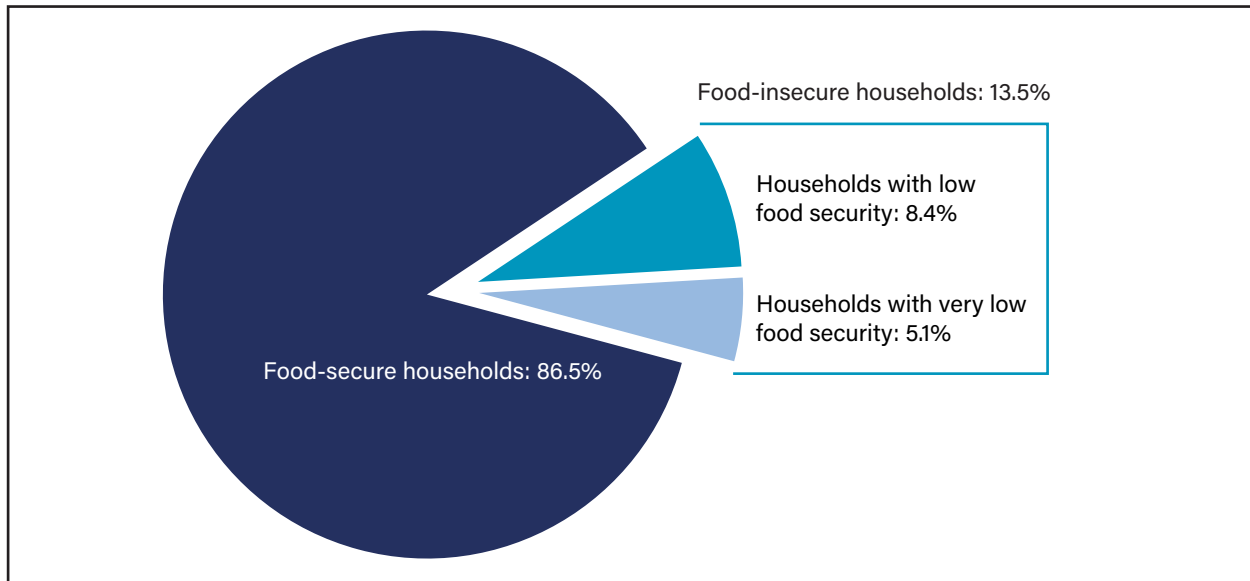
Prevalence of Food Insecurity—National Conditions and Trends

An estimated 86.5 percent of U.S. households were food secure throughout the entire year in 2023 (figure 1; table 1a). Conceptually, food secure means that all household members had access at all times to enough food for an active, healthy life (Anderson, 1990).¹⁴ Food security statistics, as operationally measured for this report using survey data, are based on household responses to items about whether the household was able to obtain enough food to meet its needs. This operational measure does not specifically address whether the household members' food intake was sufficient for active, healthy lives, the conceptual definition of food security. Nonetheless, research based on other data collections found survey-based measures of food security to be statistically associated with outcomes involving health, nutrition, and children's development in a manner that generally supports the link between the report's survey-based measure of food security and the conceptual definition of food security (Coleman-Jensen et al., 2013; Gregory & Coleman-Jensen, 2017; Nord, 2009a; Nord & Hopwood, 2007; Nord & Kantor, 2006).

The remaining 13.5 percent of U.S. households (18 million households) were food insecure at some time during 2023. Food insecurity means that households were, at times, unable to acquire adequate food for one or more household members because they had insufficient money and other resources for food. Most food-insecure households, those classified as having low food security (but not very low food security), avoided substantial reductions or disruptions in food intake, in some cases by relying on a few basic foods and reducing variety in their diets. In 2023, 8.4 percent of U.S. households (11.2 million households) had low food security, and an additional 5.1 percent (6.8 million households) had very low food security. Very low food security means that households were food insecure to the extent that the eating patterns of one or more household members were disrupted and their food intake reduced, at least some time during the year, because they could not afford enough food. Research confirms that food insecurity affects dietary quantity and quality (Gregory et al., 2019; Leung et al., 2014; Leung & Tester, 2019; Zizza et al., 2008). Low-income, food-insecure households spent less on food, purchased fewer calories overall, and had lower nutritional quality food purchases than low-income, food-secure households according to the USDA's National Food Acquisition and Purchase Survey data (Gregory et al., 2019). Even when differences in income and other characteristics are accounted for, low-income, food-insecure adults have poorer quality diets compared with low-income, food-secure adults according to individual reports of food intake from the National Health and Nutrition Examination Survey (Leung et al., 2014; Leung & Tester, 2019). Research has also confirmed that food insecurity is associated with skipping meals, as adults in food-insecure households consume fewer meals than adults in food-secure households (Zizza et al., 2008).

¹⁴ Although the conceptual definition of food security includes several dimensions of food security (e.g., availability, access, utilization, and stability), the USDA food security measure was designed to capture the central dimension of food security—particularly, food sufficiency—which captures a household's assessment of whether a household has enough money to meet its basic food needs (Bickel et al., 2000; Hamilton et al., 1997a; Hamilton et al., 1997b).

Figure 1
U.S. households by food security status, 2023

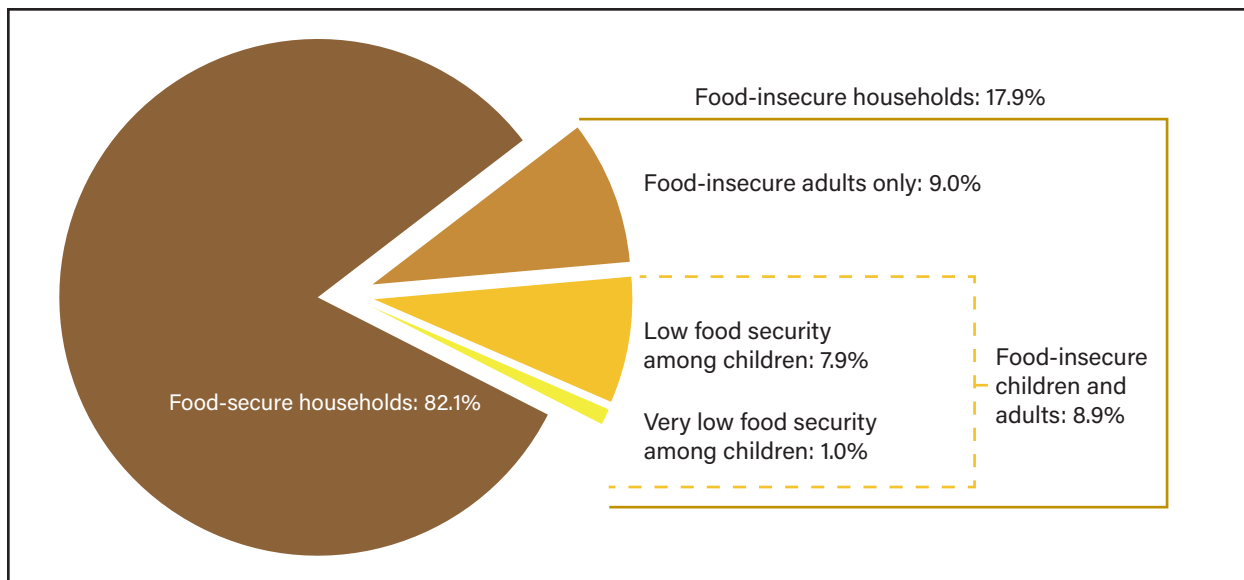


Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Among U.S. households with children under age 18, 82.1 percent were food secure in 2023. The remaining 17.9 percent of households with children (6.5 million households) were food insecure at some time in 2023 (figure 2; table 1b). Parents and caregivers often can maintain normal or near-normal diets and meal patterns for their children, even when the parents themselves are food insecure. In about half of food-insecure households with children in 2023, only adults were food insecure (9.0 percent of households with children). However, both children and adults were food insecure in 8.9 percent of households with children (3.2 million households) in 2023. In 1.0 percent of households with children (374,000 households), food insecurity among children was so severe that caregivers reported that children were hungry, skipped a meal, or did not eat for a whole day because there was not enough money for food. These households are described as having very low food security among children. Sometimes older children in such households suffer the more severe effects of food insecurity, while caregivers and other family members seek to protect younger children from those effects (Coleman-Jensen et al., 2013; Nord, 2009a).

Figure 2

U.S. households with children by food security status of adults and children, 2023



Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

The food security survey is designed to measure food security status at the household level. Although it is informative to examine the number of persons living in food-insecure households, these statistics should be interpreted carefully. Within a food-insecure household, each household member may be affected differently by the household’s food insecurity. Some members—particularly young children—may experience only mild or no effects, whereas adults are more severely affected. It is more precise to describe these statistics as representing “persons living in food-insecure households” rather than as representing “food-insecure persons.” Similarly, “persons living in households with very low food security” is a more precise description than “persons with very low food security.”

In 2023, 47.4 million people lived in food-insecure households (table 1a, middle panel). They constituted 14.3 percent of the U.S. civilian noninstitutionalized population and included 33.6 million adults (table 1a, bottom panel) and 13.8 million children (table 1b, bottom panel). About 7.2 million children (9.9 percent of children) lived in households where at least one child was food insecure. About 12.2 million adults (4.7 percent of adults) lived in households with very low food security (table 1a, bottom panel), and 841,000 children (1.2 percent of children) lived in households with very low food security among children (table 1b, bottom panel).

Table 1A

U.S. households and individuals by food security status of household, 2001–23

Category and year	Total ¹ 1,000	Food secure		Food insecure					
				All		With low food security		With very low food security	
				1,000	Percent	1,000	Percent	1,000	Percent
Households									
2023	132,532	114,576	86.5	17,956	13.5	11,157	8.4	6,799	5.1
2022	132,730	115,750	87.2	16,980	12.8	10,187	7.7	6,793	5.1
2021	132,043	118,533	89.8	13,510	10.2	8,428	6.4	5,082	3.8
2020	130,459	116,705	89.5	13,754	10.5	8,613	6.6	5,141	3.9
2019	129,621	115,959	89.5	13,662	10.5	8,340	6.4	5,322	4.1
2018	129,245	114,934	88.9	14,311	11.1	8,730	6.8	5,581	4.3
2017	127,272	112,254	88.2	15,018	11.8	9,261	7.3	5,757	4.5
2016	126,401	110,850	87.7	15,551	12.3	9,413	7.4	6,138	4.9
2015	125,164	109,315	87.3	15,849	12.7	9,540	7.7	6,309	5.0
2014	124,044	106,618	86.0	17,426	14.0	10,488	8.4	6,938	5.6
2013	122,579	105,070	85.7	17,509	14.3	10,664	8.7	6,845	5.6
2012	121,546	103,914	85.5	17,632	14.5	10,679	8.8	6,953	5.7
2011	119,484	101,631	85.1	17,853	14.9	11,014	9.2	6,839	5.7
2010	118,756	101,527	85.5	17,229	14.5	10,872	9.1	6,357	5.4
2009	118,174	100,820	85.3	17,354	14.7	10,601	9.0	6,753	5.7
2008	117,565	100,416	85.4	17,149	14.6	10,426	8.9	6,723	5.7
2007	117,100	104,089	88.9	13,011	11.1	8,262	7.0	4,749	4.1
2006	115,609	102,961	89.1	12,648	10.9	8,031	6.9	4,617	4.0
2005	114,437	101,851	89.0	12,586	11.0	8,158	7.1	4,428	3.9
2004	112,967	99,473	88.1	13,494	11.9	9,045	8.0	4,449	3.9
2003	112,214	99,631	88.8	12,583	11.2	8,663	7.7	3,920	3.5
2002	108,601	96,543	88.9	12,058	11.1	8,259	7.6	3,799	3.5
2001	107,824	96,303	89.3	11,521	10.7	8,010	7.4	3,511	3.3
All individuals (by food security status of household)²									
2023	330,691	283,302	85.7	47,389	14.3	30,917	9.3	16,472	5.0
2022	327,892	283,741	86.5	44,151	13.5	28,165	8.6	15,986	4.9
2021	325,508	291,664	89.6	33,844	10.4	22,726	7.0	11,118	3.4
2020	324,790	286,503	88.2	38,287	11.8	25,874	8.0	12,413	3.8
2019	324,235	289,028	89.1	35,207	10.9	23,362	7.2	11,845	3.7
2018	323,005	285,778	88.5	37,227	11.5	24,577	7.6	12,650	3.9
2017	320,418	280,374	87.5	40,044	12.5	27,159	8.5	12,885	4.0
2016	319,029	277,825	87.1	41,204	12.9	26,556	8.3	14,648	4.6
2015	316,161	273,923	86.6	42,238	13.4	27,605	8.7	14,633	4.6
2014	313,305	265,170	84.6	48,135	15.4	30,922	9.9	17,213	5.5
2013	310,853	261,775	84.2	49,078	15.8	31,974	10.3	17,104	5.5
2012	308,361	259,395	84.1	48,966	15.9	31,787	10.3	17,179	5.6
2011	305,893	255,773	83.6	50,120	16.4	33,232	10.9	16,888	5.5
2010	304,034	255,202	83.9	48,832	16.1	32,777	10.8	16,055	5.3
2009	301,750	251,588	83.4	50,162	16.6	32,499	10.8	17,663	5.9
2008	299,567	250,459	83.6	49,108	16.4	31,824	10.6	17,284	5.8
2007	297,042	260,813	87.8	36,229	12.2	24,287	8.2	11,942	4.0
2006	294,010	258,495	87.9	35,515	12.1	24,395	8.3	11,120	3.8
2005	291,501	256,373	87.9	35,128	12.1	24,349	8.4	10,779	3.7
2004	288,603	250,407	86.8	38,196	13.2	27,535	9.5	10,661	3.7
2003	286,410	250,155	87.3	36,255	12.7	26,622	9.3	9,633	3.4
2002	279,035	244,133	87.5	34,902	12.5	25,517	9.1	9,385	3.4
2001	276,661	243,019	87.8	33,642	12.2	24,628	8.9	9,014	3.3

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Category and year	Total ¹ 1,000	Food secure		Food insecure					
				All		With low food security		With very low food security	
				1,000	Percent	1,000	Percent	1,000	Percent
Adults (by food security status of household) ²									
2023	258,488	224,928	87.0	33,560	13.0	21,409	8.3	12,151	4.7
2022	255,297	224,541	88.0	30,756	12.0	19,034	7.4	11,722	4.6
2021	253,092	228,510	90.3	24,582	9.7	16,007	6.3	8,575	3.4
2020	251,953	225,388	89.5	26,565	10.5	17,174	6.8	9,391	3.7
2019	250,956	226,481	90.2	24,475	9.8	15,495	6.2	8,980	3.6
2018	249,443	223,390	89.6	26,053	10.4	16,576	6.6	9,477	3.8
2017	246,517	219,013	88.8	27,504	11.2	17,796	7.2	9,708	3.9
2016	245,200	216,934	88.5	28,266	11.5	17,498	7.1	10,768	4.4
2015	242,706	213,586	88.0	29,120	12.0	18,235	7.5	10,885	4.5
2014	239,937	207,125	86.3	32,812	13.7	20,425	8.5	12,387	5.2
2013	237,219	203,913	86.0	33,306	14.0	21,115	8.9	12,191	5.1
2012	234,730	201,662	85.9	33,068	14.1	20,708	8.8	12,359	5.3
2011	231,385	197,923	85.5	33,462	14.5	21,371	9.2	12,091	5.2
2010	229,129	196,505	85.8	32,624	14.2	21,357	9.3	11,267	4.9
2009	227,543	194,579	85.5	32,964	14.5	20,741	9.1	12,223	5.4
2008	225,461	193,026	85.6	32,435	14.4	20,320	9.0	12,115	5.4
2007	223,467	199,672	89.4	23,795	10.6	15,602	7.0	8,193	3.7
2006	220,423	197,536	89.6	22,887	10.4	15,193	6.9	7,694	3.5
2005	217,897	195,172	89.6	22,725	10.4	15,146	7.0	7,579	3.5
2004	215,564	191,236	88.7	24,328	11.3	16,946	7.9	7,382	3.4
2003	213,441	190,451	89.2	22,990	10.8	16,358	7.7	6,632	3.1
2002	206,493	184,718	89.5	21,775	10.5	15,486	7.5	6,289	3.0
2001	204,340	183,398	89.8	20,942	10.2	14,879	7.3	6,063	3.0

¹Totals exclude households for which food security status is unknown because household respondents did not give a valid response to any of the questions in the food security scale. In 2023, these exclusions represented 183,000 households (0.1 percent of all households).

²The food security survey measures food security status at the household level. Not all individuals residing in food-insecure households were directly affected by the households' food insecurity. Similarly, not all individuals in households classified as having very low food security were subject to the reductions in food intake and disruptions in eating patterns that characterize this condition. Young children are often protected from effects of the households' food insecurity.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements.

Table 1B

U.S. households with children by food security status and children by food security status of household, 2001-23

Category and year	Total ¹	Food-secure households		Food-insecure households ²		Households with food-insecure children ³		Households with very low food security among children	
		1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000
Households with children									
2023	36,216	29,726	82.1	6,490	17.9	3,227	8.9	374	1.0
2022	37,235	30,798	82.7	6,437	17.3	3,265	8.8	381	1.0
2021	36,765	32,170	87.5	4,595	12.5	2,290	6.2	274	0.7
2020	37,903	32,280	85.2	5,623	14.8	2,870	7.6	322	0.8
2019	37,614	32,480	86.4	5,134	13.6	2,434	6.5	213	0.6
2018	37,612	32,369	86.1	5,243	13.9	2,658	7.1	220	0.6
2017	37,942	31,975	84.3	5,967	15.7	2,926	7.7	250	0.7
2016	38,400	32,058	83.5	6,342	16.5	3,069	8.0	298	0.8
2015	38,978	32,519	83.4	6,459	16.6	3,022	7.8	274	0.7
2014	39,079	31,590	80.8	7,489	19.2	3,665	9.4	422	1.1
2013	38,486	30,978	80.5	7,508	19.5	3,814	9.9	360	0.9
2012	39,201	31,354	80.0	7,847	20.0	3,910	10.0	463	1.2
2011	38,803	30,814	79.4	7,989	20.6	3,862	10.0	374	1.0
2010	39,419	31,447	79.8	7,972	20.2	3,861	9.8	386	1.0
2009	39,525	31,114	78.7	8,411	21.3	4,208	10.6	469	1.2
2008	39,699	31,364	79.0	8,335	21.0	4,361	11.0	506	1.3
2007	39,390	33,160	84.2	6,230	15.8	3,273	8.3	323	0.8
2006	39,436	33,279	84.4	6,157	15.6	3,312	8.4	221	0.6
2005	39,601	33,404	84.4	6,197	15.6	3,244	8.2	270	0.7
2004	39,990	32,967	82.4	7,023	17.6	3,808	9.5	274	0.7
2003	40,286	33,575	83.3	6,711	16.7	3,606	9.0	207	0.5
2002	38,647	32,267	83.5	6,380	16.5	3,456	8.9	265	0.7
2001	38,330	32,141	83.9	6,189	16.1	3,225	8.4	211	0.6
Children (by food security status of household)⁴									
2023	72,203	58,374	80.8	13,829	19.2	7,162	9.9	841	1.2
2022	72,595	59,201	81.5	13,394	18.5	7,263	10.0	783	1.1
2021	72,416	63,154	87.2	9,262	12.8	4,959	6.8	521	0.7
2020	72,837	61,115	83.9	11,722	16.1	6,142	8.4	584	0.8
2019	73,279	62,547	85.4	10,732	14.6	5,332	7.3	361	0.5
2018	73,562	62,388	84.8	11,174	15.2	5,999	8.2	540	0.7
2017	73,901	61,361	83.0	12,540	17.0	6,541	8.9	540	0.7
2016	73,829	60,891	82.5	12,938	17.5	6,519	8.8	703	1.0
2015	73,455	60,337	82.1	13,118	17.9	6,377	8.7	541	0.7
2014	73,368	58,045	79.1	15,323	20.9	7,949	10.8	914	1.2
2013	73,634	57,862	78.6	15,772	21.4	8,585	11.7	765	1.0
2012	73,631	57,733	78.4	15,898	21.6	8,290	11.3	977	1.3
2011	74,508	57,850	77.6	16,658	22.4	8,565	11.5	845	1.1
2010	74,905	58,697	78.4	16,208	21.6	8,458	11.3	976	1.3
2009	74,207	57,010	76.8	17,197	23.2	8,957	12.1	988	1.3
2008	74,106	57,433	77.5	16,673	22.5	9,098	12.3	1,077	1.5
2007	73,575	61,140	83.1	12,435	16.9	6,766	9.2	691	0.9
2006	73,587	60,959	82.8	12,628	17.2	7,065	9.6	430	0.6
2005	73,604	61,201	83.1	12,403	16.9	6,718	9.1	606	0.8
2004	73,039	59,171	81.0	13,868	19.0	7,823	10.7	545	0.7
2003	72,969	59,704	81.8	13,265	18.2	7,388	10.1	420	0.6
2002	72,542	59,415	81.9	13,127	18.1	7,397	10.2	567	0.8
2001	72,321	59,620	82.4	12,701	17.6	6,866	9.5	467	0.6

¹Totals exclude households for which food security status is unknown because the households did not give a valid response to any of the questions in the food security scale. In 2023, these exclusions represented 35,000 households with children (0.1 percent of all households with children). Children are defined as ages 0-17.

²Food-insecure households are those with low or very low food security among adults or children or both.

³In some food-insecure households with children, only adults were food insecure. Households with food-insecure children are those with low or very low food security among children.

⁴The food security survey measures food security status at the household level. Not all children residing in food-insecure households were directly affected by the households' food insecurity. Similarly, not all children in households classified as having very low food security among children were subject to the reductions in food intake and disruptions in eating patterns that characterize this condition. Young children are often protected from effects of the households' food insecurity.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements.

Statistical Supplement tables S-2 and S-3 present estimates of the number of people and the number of children in households in each food security status and household type (Rabbitt et al., 2024).

When interpreting food security statistics in this report, readers should remember that households were classified as having low or very low food security based on their experiencing the conditions indicated in the survey questions at any time during the previous 12 months. The prevalence of these conditions on any given day is far below the corresponding annual prevalence. For example, the prevalence of very low food security during the 30 days before the December 2023 survey is 3.2 percent (Statistical Supplement table S-4 in Rabbitt et al., 2024). Most households that reported experiencing food-insecure conditions during the previous 30 days reported experiencing the conditions between 1 to 7 days during the month (Statistical Supplement table S-9 in Rabbitt et al., 2024; for more information, see box, “When Food Insecurity Occurs in U.S. Households, It Is Usually Recurrent but Not Constant,” page 15).¹⁵

¹⁵ The USDA, Economic Research Service no longer provides an estimated average daily prevalence of very low food security because of a change in the U.S. Department of Commerce, Bureau of the Census’ processing of continuous variables. Beginning with the 2019 Current Population Survey Food Security Supplement data, all continuous variables for the number of days out of the previous 30 days that food-insecure conditions occurred are only released after being categorized into ranges of number of days to reduce the risk of disclosure related to a small number of households reporting a single value. Those categorical variables result in less precise estimates of the average daily prevalence of food insecurity. See Statistical Supplement table S-9 for the percent of households reporting each of the food-insecure conditions in increments of 1–7 days, 8–14 days, and 15–30 days (Rabbitt et al., 2024).

When Food Insecurity Occurs in U.S. Households, It Is Usually Recurrent but Not Constant

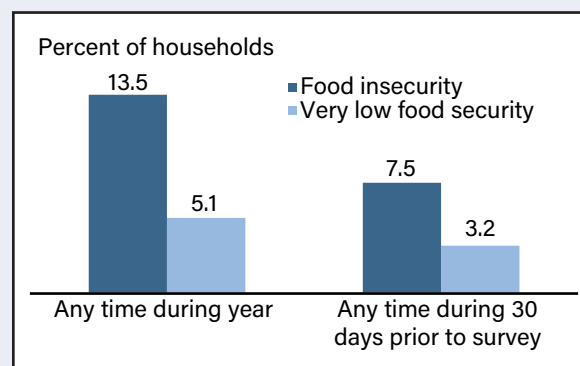
When households experience very low food security in the United States, the resulting instances of reduced food intake and disrupted eating patterns are normally occasional or episodic and not usually constant. The food security measurement methods used in this report are designed to register these occasional or episodic occurrences. The questions used to assess households' food security status ask whether a condition, experience, or behavior occurred at any time in the past 12 months, and households can be classified as having very low food security based on a single, severe episode during the year. Analyses of additional information collected in the food security survey on how frequently various food-insecure conditions occurred during the year, whether they occurred during the 30 days before the survey (conducted December 10–19, 2023), and, if so, for how many days, provide insight into the frequency and duration of food insecurity in U.S. households. Rabbitt et al. (2024) present details about how the number of months of food insecurity (and very low food security) was calculated. These analyses revealed that in 2023:

- About one-fourth of U.S. households with very low food security at any time during the year experienced the associated conditions rarely or occasionally, in only 1 or 2 months of the year. About three-fourths of respondent households experienced the conditions recurrently in 3 or more months of the year.
- About one-fourth of food-insecure households and one-third of those with very low food security experienced the associated conditions frequently or chronically. That is, the conditions occurred often or almost every month.
- On average, households that were food insecure at some time during the year were food insecure in 7 months during the year. During the 30-day period ending in mid-December 2023, 9.9 million households (7.5 percent of all households) were food insecure, about 55 percent of the number was food insecure at any time during the year (for more information, see Statistical Supplement table S-4, Rabbitt et al., 2024).

- Similarly, households with very low food security at some time during the year experienced the associated conditions, on average, in 8 months during the year. During the 30-day period ending in mid-December 2023, 4.2 million households (3.2 percent of all households) had very low food security, about 62 percent of the number with very low food security at some time during the year (for more information, see Statistical Supplement table S-4, Rabbitt et al., 2024).
- Most households that had very low food security at some time during a month experienced the associated conditions in 1 to 7 days of the month.
- The omission of homeless families and individuals from these frequency statistics biases the statistics downward, and the bias may be substantial relative to the estimates, especially for the most severe conditions.

Statistical Supplement tables S-7 to S-9 (Rabbitt et al., 2024) provide information on how often conditions indicating food insecurity occurred, as reported by respondents to the December 2023 Food Security Supplement. Nord et al. (2000) have presented more information about the frequency of food insecurity. Ryu and Bartfeld (2012) and Wilde et al. (2010) have offered more information about longer term patterns of food insecurity.

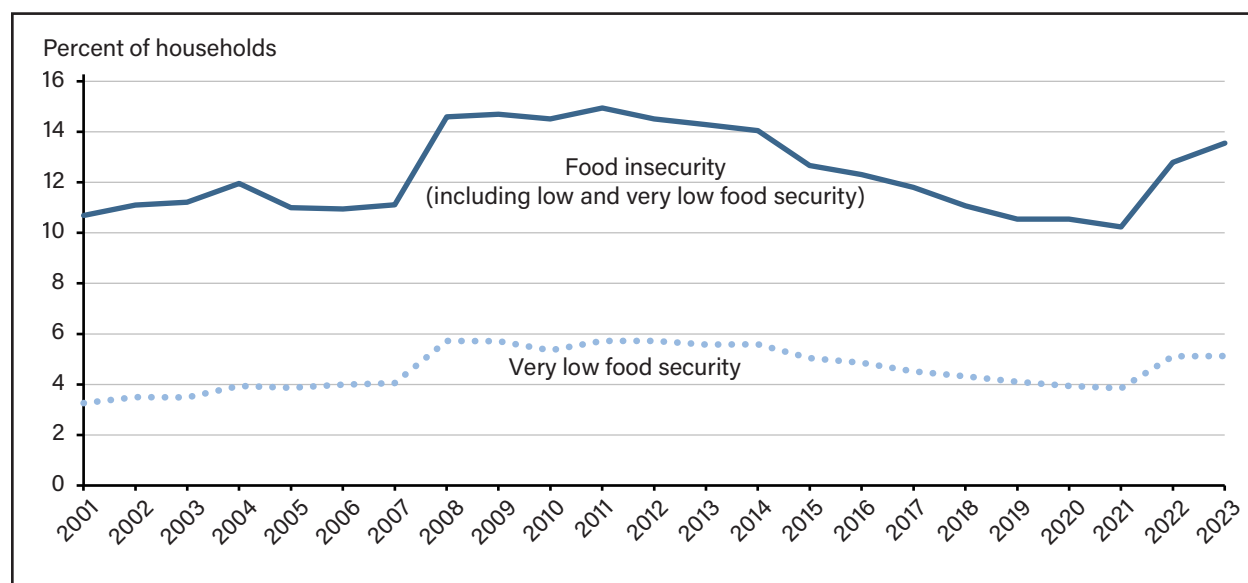
Prevalence of food insecurity and very low food security, by reference period (2023)



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement.

The prevalence of food insecurity in 2023 (13.5 percent) was statistically significantly higher than the food insecurity prevalence observed from 2015 through 2022 and statistically significantly lower than the levels observed from 2010 through 2014 (figure 3; table 1a). Regarding earlier annual trends, a statistically significant decline in the prevalence of food insecurity from 11.1 percent in 2018 to 10.5 percent occurred in 2019, and food insecurity was unchanged at 10.5 percent in 2020 (figure 3; table 1a). For the first time, in 2019, food insecurity was statistically significantly below the 11.1-percent, prerecession level of 2007. Year-to-year declines in food insecurity from 2014 to 2015, 2016 to 2017, and 2017 to 2018 were also statistically significant. Some year-to-year changes were not statistically significant, that is, there was no real change, or the changes were within the range that could occur from sampling variation. The cumulative decline from 2011 (14.9 percent) to 2014 (14 percent) was statistically significant. In the previous decade, food insecurity increased from 10.7 percent in 2001 to 11.9 percent in 2004, declined to about 11.0 percent in 2005–07, then increased significantly in 2008 (to 14.6 percent), and remained essentially unchanged (i.e., the difference was not statistically significant) at that level in 2009 and 2010.

Figure 3
Trends in the prevalence of food insecurity and very low food security in U.S. households, 2001–23



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements.

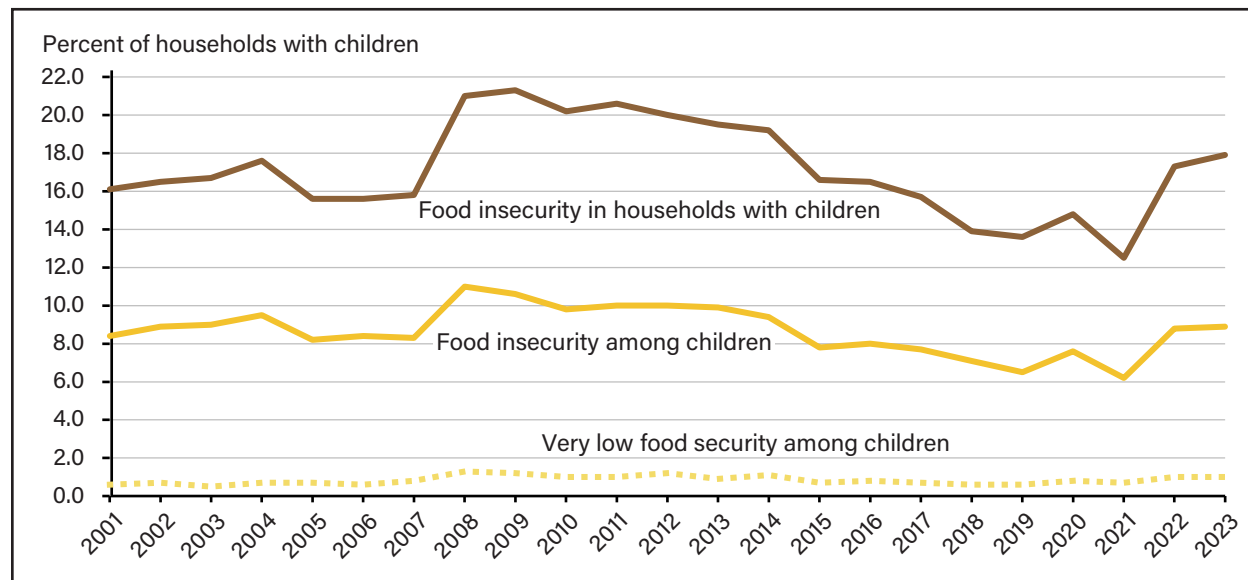
The prevalence of very low food security in 2023 (5.1 percent) was not statistically significantly different from the prevalence in 2022 (5.1 percent), but the prevalence was statistically significantly higher than the annual prevalence from 2017 through 2021 (table 1a). The prevalence of very low food security in 2023 was not statistically significantly different from that observed in 2015–16 but was statistically significantly lower than that observed in 2011–2014. Statistically significant year-to-year declines in very low food security occurred in 2014–15 and 2016–17. The prevalence of very low food security was essentially unchanged from 2011 (5.7 percent) through 2014. The prevalence of very low food security was also 5.7 percent in 2008 and 2009. Before 2008, the prevalence of very low food security increased from 3.3 percent in 2001 to 3.9 percent in 2004 and remained essentially unchanged through 2007 (4.1 percent).

The prevalence of food insecurity in households with children was higher in 2023 (17.9 percent) than in 2022 (17.3 percent), a difference that is not statistically significant (figure 4; table 1b). The 2023 prevalence of food insecurity in households with children was statistically significantly higher than that observed in 2015 through 2021 and statistically significantly lower than the levels in 2010 through 2014. The percentage of households with food insecurity among children in 2023 (8.9 percent) was not statistically significantly different from the

2022 prevalence (8.8 percent) but was statistically significantly higher than the prevalence observed in 2015 through 2021. The prevalence of households with food insecurity among children between 2010 and 2013 was statistically significantly higher than that observed in 2023. The percentage of households with very low food security among children in 2023 (1.0 percent) was not statistically significantly different from the prevalence from 2022 (1.0 percent) but was statistically significantly higher than the 2015 and 2017 through 2019 prevalence.

Figure 4

Trends in the prevalence of food insecurity in U.S. households with children, 2001-23



Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements data.

Prevalence of Food Insecurity by Selected Household Characteristics

The prevalence of food insecurity varied considerably in 2023 among households with different demographic and economic characteristics (table 2). The differences in food security across demographic and geographic groups partly reflected the differences in income across those groups. Although no adjustment was made for income in the statistics presented in this report, food insecurity was strongly associated with income. For example, 38.7 percent of households with annual incomes below the official poverty line (household income-to-poverty ratio under 1.00) were food insecure, compared with just 7.5 percent of those with incomes at or above 185 percent of the poverty line.¹⁶ Table S-1 in the Statistical Supplement (Rabbitt et al., 2024) shows food insecurity by selected household characteristics for households with annual incomes below 130 percent of the poverty line. Most households with gross incomes at or below 130 percent of the poverty line are eligible to participate in SNAP, provided they meet other eligibility criteria (USDA, Food and Nutrition Service (FNS), 2022).

¹⁶ The Federal poverty line was \$30,900 for a family of four (two adults and two children) in 2023. Some households in the Current Population Survey did not report their income because they did not know or refused to provide it. U.S. Department of Commerce, Bureau of the Census imputed income for those households and identified which households did not report their income. USDA’s Economic Research Service calculated the household income-to-poverty ratio only for households with reported income and assigned those households that did not report income as having “income unknown.”

Rates of food insecurity were statistically significantly below the national average of 13.5 percent for the following groups (all differences described in the following bulleted sections are statistically significant; table 2):

- Married couples with children (11.1 percent);¹⁷
- Households with no children (11.9 percent), especially those with more than one adult and no children (9.5 percent);
- Households with an adult aged 65 and older (9.3 percent), and an adult age 65 and older living alone (11.0 percent);
- Households with White, non-Hispanic (9.9 percent) or other, non-Hispanic¹⁸ (12.0 percent) adult reference persons (the survey reference person is an adult household member in whose name the housing unit is owned or rented);¹⁹
- Households with incomes at or above 185 percent of the poverty threshold (7.5 percent) and households with unknown incomes (10.9 percent);
- Households in metropolitan areas outside principal cities (suburbs; 11.7 percent); and
- Households in the Northeast region of the United States (12.0 percent).

¹⁷Beginning with the 2020 Current Population Survey, same-sex partners are identified in the data. The married couple category includes same sex married partners.

¹⁸ The “other, non-Hispanic” category for race/ethnicity of household reference person includes non-Hispanic adults that identify as multiple races, American Indian, Alaskan Native, Asian, Hawaiian, or Pacific Islander. There are not sufficient respondents in the Current Population Survey Food Security Supplement to present reliable estimates for these individual groups for all outcomes, so they are grouped into the “other, non-Hispanic” category.

¹⁹ The “householder” or “household reference person” refers to the person in whose name the housing unit sampled is owned or rented. If the housing unit is owned or rented jointly by a married couple, the household reference person may be either spouse. Previously, the household reference person was referred to as the household head.

Table 2

U.S. households by food security status and selected household characteristics, 2023

Category	Total ¹	Food secure		Food insecure					
		1,000	Percent	All		With low food security		With very low food security	
				1,000	Percent	1,000	Percent	1,000	Percent
All households	132,532	114,576	86.5	17,956	13.5	11,157	8.4	6,799	5.1
Household composition									
With children < 18 years	36,216	29,726	82.1	6,490	17.9	4,518	12.5	1,972	5.4
With children < 6 years	14,453	11,867	82.1	2,586	17.9	1,830	12.7	756	5.2
Married-couple families	23,805	21,172	88.9	2,633	11.1	1,989	8.4	644	2.7
Female head, no spouse	8,799	5,744	65.3	3,055	34.7	2,017	22.9	1,038	11.8
Male head, no spouse	3,187	2,467	77.4	720	22.6	447	14.0	273	8.6
Other household with child ²	425	342	80.5	83	19.5	NA	NA	NA	NA
With no children < 18 years	96,316	84,850	88.1	11,466	11.9	6,639	6.9	4,827	5.0
More than one adult	56,059	50,706	90.5	5,353	9.5	3,319	5.9	2,034	3.6
Women living alone	21,831	18,303	83.8	3,528	16.2	1,946	9.0	1,582	7.2
Men living alone	18,427	15,843	86.0	2,584	14.0	1,374	7.4	1,210	6.6
With an adult aged 65+	43,683	39,611	90.7	4,072	9.3	2,704	6.2	1,368	3.1
Adult age 65+ living alone	16,613	14,791	89.0	1,822	11.0	1,117	6.8	705	4.2
Race/ethnicity of household reference persons									
White, non-Hispanic	85,275	76,855	90.1	8,420	9.9	5,077	6.0	3,343	3.9
Black, non-Hispanic	17,020	13,053	76.7	3,967	23.3	2,479	14.6	1,488	8.7
Hispanic ³	19,593	15,298	78.1	4,295	21.9	2,860	14.6	1,435	7.3
Other, non-Hispanic	10,644	9,370	88.0	1,274	12.0	741	7.0	533	5.0
Household income-to-poverty ratio									
Under 1.00	11,725	7,193	61.3	4,532	38.7	2,537	21.7	1,995	17.0
Under 1.30	16,599	10,407	62.7	6,192	37.3	3,598	21.7	2,594	15.6
Under 1.85	27,231	18,103	66.5	9,128	33.5	5,383	19.7	3,745	13.8
1.85 and over	77,973	72,126	92.5	5,847	7.5	3,827	4.9	2,020	2.6
Income unknown	27,328	24,348	89.1	2,980	10.9	1,947	7.1	1,033	3.8
Area of residence ⁴									
Inside metropolitan area	114,065	98,963	86.8	15,102	13.2	9,441	8.2	5,661	5.0
In principal cities ⁵	37,405	31,439	84.1	5,966	15.9	3,753	10.0	2,213	5.9
Not in principal cities	59,419	52,451	88.3	6,968	11.7	4,361	7.3	2,607	4.4
Outside metropolitan area	18,467	15,614	84.6	2,853	15.4	1,716	9.2	1,137	6.2
Census geographic region									
Northeast	22,679	19,965	88.0	2,714	12.0	1,700	7.5	1,014	4.5
Midwest	28,428	24,619	86.6	3,809	13.4	2,359	8.3	1,450	5.1
South	51,797	44,195	85.3	7,602	14.7	4,698	9.1	2,904	5.6
West	29,629	25,798	87.1	3,831	12.9	2,400	8.1	1,431	4.8

NA = Not reported; fewer than 10 households in the survey with this characteristic had very low food security.

¹Totals exclude households for which food security status is unknown because household respondents did not give a valid response to any of the questions in the food security scale. In 2023, these exclusions represented 183,000 households (0.1 percent of all households).

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

³Hispanic respondents may be of any race.

⁴Metropolitan area residence is based on 2013 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2014 and later but are not precisely comparable with those of earlier years.

⁵Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 15 percent of households in metropolitan statistical areas.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement.

Rates of food insecurity in 2023 were statistically significantly higher than the national average (13.5 percent) for the following groups (table 2):

- All households with children (17.9 percent);²⁰
- Households with children under age 6 (17.9 percent);
- Households with children headed by a single female (i.e., single mothers, labeled “Female head, no spouse;” 34.7 percent) or a single male (i.e., single fathers, labeled “Male head, no spouse;” 22.6 percent);²¹
- Women living alone (16.2 percent);
- Households with Black, non-Hispanic (23.3 percent) and Hispanic (21.9 percent) household reference persons;
- Households with incomes below 100 percent of the poverty threshold (38.7 percent), 130 percent of the poverty threshold (37.3 percent), and 185 percent of the poverty threshold (33.5 percent);
- Households in principal cities (15.9 percent) and nonmetropolitan areas (rural; 15.4 percent); and
- Households in the South (14.7 percent).

Food insecurity was statistically significantly lower in metropolitan areas outside principal cities (suburbs, 11.7 percent) than in principal cities in metropolitan areas (urban, 15.9 percent) and nonmetropolitan areas (rural, 15.4 percent).²² Regionally, the prevalence of food insecurity in the Northeast (12.0 percent), Midwest (13.4 percent), and West (12.9 percent) was statistically significantly lower than the prevalence in the South (14.7 percent) (table 2). Compared with the national average, food insecurity was statistically significantly lower in the Northeast but statistically significantly higher in the South.

Statistics in table 2 can also be used to calculate the share that each demographic group contributes to the population of food-insecure households. Among all food-insecure households in 2023, 36.1 percent were households with children, which included 17.0 percent that were female-headed households with children (labeled “Female head, no spouse”) and 14.7 percent that were married-couple households with children.²³

²⁰ About 43 percent of the difference in food insecurity between households with and without children results from a difference in the measures applied to the two types of households. Responses to questions about children and adults are considered in assessing the food security status of households with children. However, for both types of households, a total of three indications of food insecurity is required for classification as food insecure. In 2023, even with the child-referenced questions omitted from the scale, 15.3 percent of households with children would be classified as food insecure (that is, as having food insecurity among adults), compared with 11.9 percent for households without children. Comparisons of very low food security are not biased substantially by this measurement issue because a higher threshold is applied to households with children, consistent with the larger number of questions taken into consideration (Nord & Coleman-Jensen, 2014). Coleman-Jensen et al. (2017) provided a discussion of a comparable classification method for households with and without children.

²¹ Some households with children headed by a single woman or a single man as classified for these analyses included other adults, who may have been parents, siblings, cohabiting partners, adult children, other relatives of the reference person, or unrelated roomers or boarders.

²² Here, the authors use “rural” to refer to nonmetropolitan counties, “urban” to refer to the principal cities of a metropolitan statistical area (MSA), and “suburbs” to refer to metropolitan locations outside of principal cities. Principal cities include the incorporated areas of the largest city in each MSA and other cities in the MSA that meet specified criteria based on population size and commuting patterns. Nonmetropolitan areas are counties outside MSAs. Revised MSAs and principal cities within them were delineated by the U.S. Office of Management and Budget in 2013, based on revised standards developed by the U.S. Department of Commerce, Bureau of the Census (Census Bureau) in collaboration with other Federal agencies. The Census Bureau implemented the revised delineations beginning with the 2014 Current Population Survey Food Security Supplement. Food security prevalence statistics by area of residence for 2014 and later are not precisely comparable with corresponding statistics from earlier years.

²³ The share of food-insecure households that are female-headed households with children can be calculated as $(3,055 \div 17,956) = 0.170$. Similarly, the share of food-insecure households that are married-couple households with children is $(2,633 \div 17,956) = 0.147$.

Among all food-insecure households in 2023, 63.9 percent were households with no children. About 22.7 percent of all food-insecure households included adults aged 65 and older. Households with reported incomes below 185 percent of the poverty threshold comprised most food-insecure households (50.8 percent). Households with reported incomes at or above 185 percent of the poverty threshold comprised 32.6 percent of all food-insecure households, and households with unknown income comprised the remaining 16.6 percent of all food-insecure households in 2023.

The prevalence of very low food security in various types of households followed a pattern like that observed for food insecurity. Percentages were statistically significantly lower than the 2023 national average of 5.1 percent for the following groups (table 2):

- Married couples with children (2.7 percent);
- Multiple-adult households with no children (3.6 percent);
- Households with an adult age 65 and older (3.1 percent) and adults aged 65 and older living alone (4.2 percent);
- Households with White, non-Hispanic reference persons (3.9 percent);
- Households with incomes at or above 185 percent of the poverty line (2.6 percent) and households with unknown incomes (3.8 percent);
- Households in the suburbs outside principal cities within metropolitan areas (4.4 percent); and
- Households in the Northeast (4.5 percent).

The prevalence of very low food security was statistically significantly higher than the national average (5.1 percent) for the following groups (see table 2 for statistics):

- Households with children headed by a single female (11.8 percent) and households with children headed by a single male (8.6 percent);
- Women living alone (7.2 percent) and men living alone (6.6 percent);
- Households with Black, non-Hispanic (8.7 percent) and Hispanic household reference persons (7.3 percent);
- Households with incomes below 100 percent of the poverty line (17.0 percent), below 130 percent of the poverty line (15.6 percent), and below 185 percent of the poverty line (13.8 percent); and
- Households in principal cities (5.9 percent) and rural areas (6.2 percent).

In 8.9 percent of households with children, one or more child(ren) was food insecure in 2023 (table 3).²⁴ Among household categories, the percentage of households with food-insecure children was statistically significantly lower than the national average for the following groups:

- Married-couple households (5.1 percent);
- Households with a White, non-Hispanic reference person (5.9 percent); and
- Households with incomes at or above 185 percent of the poverty line (3.7 percent).

²⁴ Households are classified as having food insecurity among children if they report 2 or more food-insecure conditions among children in response to questions 11–18 in the box on pages 4–5.

The percentage of households with food-insecure children was statistically significantly higher than the national average (8.9 percent) for the following groups (table 3):

- Female-headed households (18.0 percent) and male-headed households (12.4 percent);
- Households with a Black, non-Hispanic reference person (14.0 percent) or Hispanic reference person (14.0 percent); and
- Households with incomes below 100 percent of the poverty line (25.5 percent), below 130 percent of the poverty line (24.7 percent), and below 185 percent of the poverty line (20.7 percent).

Table 3

Prevalence of food security and food insecurity in households with children by selected household characteristics, 2023

Category	Total ¹		Food-secure households		Food-insecure households ²		Households with food-insecure children ³		Households with very low food security among children	
	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All households with children	36,216		29,726	82.1	6,490	17.9	3,227	8.9	374	1.0
Household composition										
With children < 6 years	14,453		11,867	82.1	2,586	17.9	1,172	8.1	127	0.9
Married-couple families	23,805		21,172	88.9	2,633	11.1	1,217	5.1	106	0.4
Female head, no spouse	8,799		5,745	65.3	3,054	34.7	1,580	18.0	212	2.4
Male head, no spouse	3,187		2,467	77.4	720	22.6	396	12.4	57	1.8
Other household with child ⁴	425		342	80.5	83	19.5	NA	NA	NA	NA
Race/ethnicity of household reference persons										
White, non-Hispanic	20,295		17,587	86.7	2,708	13.3	1,206	5.9	71	0.3
Black, non-Hispanic	4,687		3,399	72.5	1,288	27.5	658	14.0	98	2.1
Hispanic ⁵	7,704		5,703	74.0	2,001	26.0	1,078	14.0	180	2.3
Other, non-Hispanic	3,530		3,037	86.0	493	14.0	284	8.0	NA	NA
Household income-to-poverty ratio										
Under 1.00	3,898		2,106	54.0	1,792	46.0	995	25.5	142	3.6
Under 1.30	5,725		3,217	56.2	2,508	43.8	1,414	24.7	194	3.4
Under 1.85	9,644		5,944	61.6	3,700	38.4	2,000	20.7	276	2.9
1.85 and over	20,525		18,739	91.3	1,786	8.7	758	3.7	57	0.3
Income unknown	6,047		5,042	83.4	1,005	16.6	469	7.8	NA	NA
Area of residence ⁶										
Inside metropolitan area	31,298		25,805	82.4	5,493	17.6	2,748	8.8	311	1.0
In principal cities ⁷	9,619		7,552	78.5	2,067	21.5	953	9.9	119	1.2
Not in principal cities	16,998		14,372	84.6	2,626	15.4	1,396	8.2	163	1.0
Outside metropolitan area	4,918		3,921	79.7	997	20.3	479	9.7	64	1.3
Census geographic region										
Northeast	5,778		4,817	83.4	961	16.6	486	8.4	57	1.0
Midwest	7,778		6,492	83.5	1,286	16.5	652	8.4	NA	NA
South	14,273		11,449	80.2	2,824	19.8	1,390	9.7	192	1.3
West	8,388		6,970	83.1	1,418	16.9	699	8.3	72	0.9

NA = Not reported; fewer than 10 households in the survey with this characteristic had food insecurity among children or very low food security among children.

¹Totals exclude households for which food security status is unknown because the households did not give a valid response to any of the questions in the food security scale. In 2023, these exclusions represented 35,000 households with children (0.1 percent of all households with children).

²Food-insecure households are those with low or very low food security among adults or children or both.

³In some food-insecure households with children, only adults were food insecure. Households with food-insecure children are those with low or very low food security among children.

⁴Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

⁵Hispanic respondents may be of any race.

⁶Metropolitan area residence is based on 2013 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2014 and later but are not precisely comparable with those of earlier years.

⁷Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 15 percent of households with children in metropolitan statistical areas.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement.

Compared with the prevalence for all households with children in 2023 (1.0 percent), very low food security among children was statistically significantly less prevalent for the following groups:

- Married-couple households (0.4 percent);
- Households with a White, non-Hispanic reference person (0.3 percent); and
- Households with incomes at or above 185 percent of the poverty line (0.3 percent).

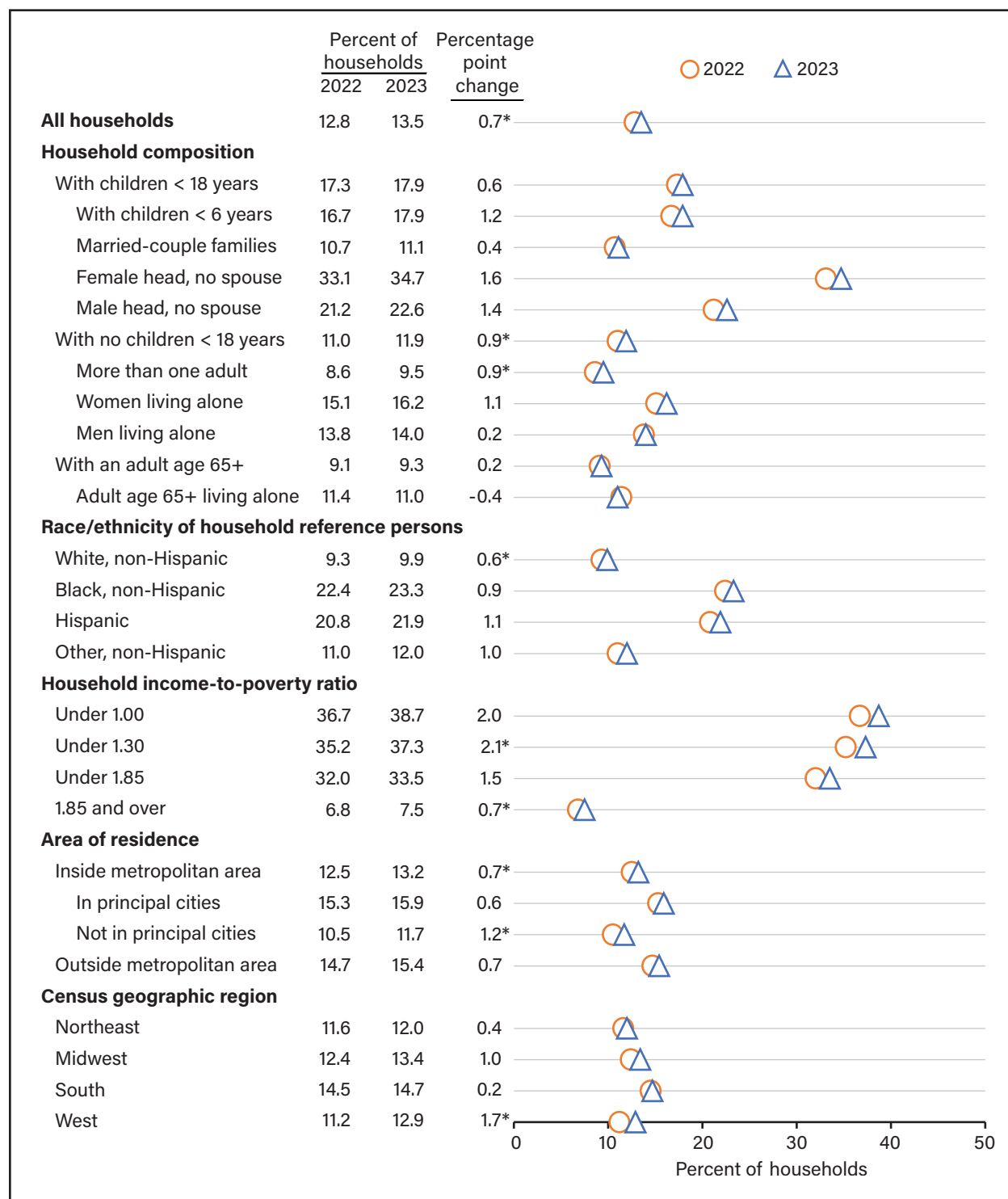
Very low food security among children in 2023 was statistically significantly more prevalent than the national average (1.0 percent) for the following groups:

- Households headed by a single female (2.4 percent);
- Households with a Hispanic reference person (2.3 percent); and
- Households with incomes below 100 percent of the poverty line (3.6 percent), below 130 percent of the poverty line (3.4 percent), and below 185 percent of the poverty line (2.9 percent).

The prevalence of household food insecurity in 2023 was higher than the prevalence in 2022 for a number of populations (figure 5).²⁵ Food insecurity increased for households without children (from 11.0 percent to 11.9 percent), households with more than one adult (from 8.6 percent to 9.5 percent), households with an adult White, non-Hispanic reference person (from 9.3 percent to 9.9 percent), households with incomes below 130 percent of the poverty line (from 35.2 percent to 37.3 percent), households with incomes at or above 185 percent of the poverty line (from 6.8 percent to 7.5 percent), households in metropolitan areas (from 12.5 percent to 13.2 percent), households not in principal cities (suburban; from 10.5 percent to 11.7 percent), and households in the West (from 11.2 percent to 12.9 percent). There were no statistically significant decreases in food insecurity between 2022 and 2023 for any populations. Figure 5 displays household prevalence rates of the percent of food-insecure households for both years, as well as percentage point changes between 2022 and 2023. An asterisk (*) next to the percentage point change indicates that the change was statistically significant. For example, as shown in figure 5, 11.0 percent of households without children were food insecure in 2022, and 11.9 percent of households without children were food insecure in 2023. That 0.9 percentage point change was statistically significant.

²⁵ Estimates of food insecurity and very low food security for 2022 were published in *Household Food Security in the United States in 2022* (Rabbitt et al., 2023).

Figure 5
Prevalence of food insecurity, 2022 and 2023



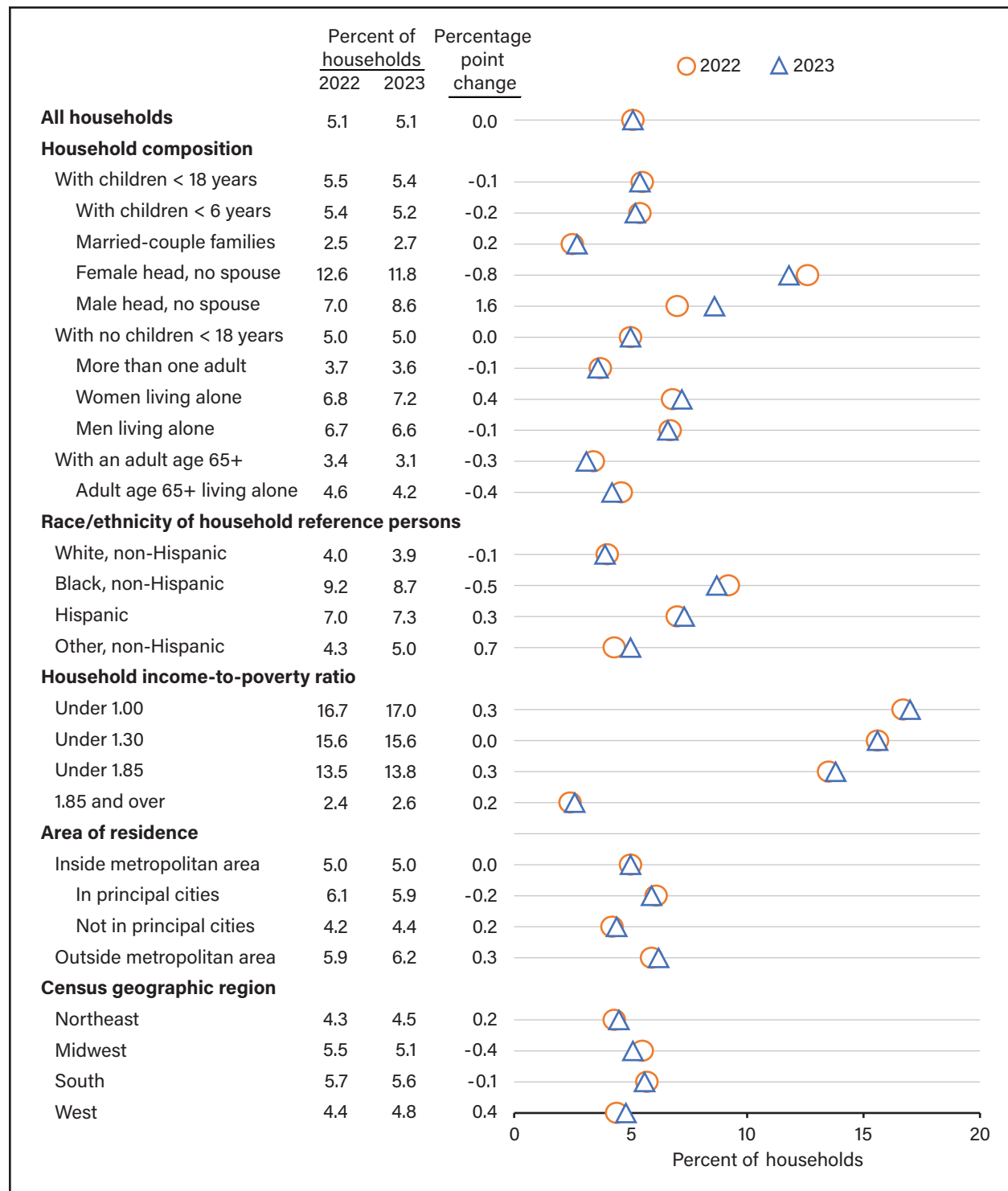
Note: An asterisk (*) denotes the change is statistically different from zero at the 90-percent confidence level ($t > 1.645$).

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2022 and 2023 Current Population Survey Food Security Supplement data.

From 2022 to 2023, there were no statistically significant increases or decreases in the prevalence of very low food security for any subpopulations (figure 6). Figure 6 displays prevalence rates of very low food security for both years, as well as percentage point changes between 2022 and 2023, with asterisks (*) indicating statistically significant changes between years.

Figure 6

Prevalence of very low food security 2022 and 2023



Note: An asterisk (*) denotes the change is statistically different from zero at the 90-percent confidence level ($t > 1.645$).

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2022 and 2023 Current Population Survey Food Security Supplement data.

Prevalence of Food Insecurity by State

The prevalence of food insecurity varies considerably by State. In addition to household-level characteristics such as income, employment, and household structure, the prevalence of food insecurity can also be affected by State-level characteristics such as average wages, cost of housing, unemployment, and State-level policies that affected access to unemployment insurance, the State Earned Income Tax Credit, and nutrition assistance programs (Bartfeld et al., 2006; Bartfeld & Men, 2017). State-level estimates were obtained by averaging 3 years of data (2021–23) to generate large enough sample sizes for each State to produce reliable estimates and detect differences across States. Using single-year food insecurity estimates for States would make it more difficult to detect whether those States were statistically above or below the national average, especially for less populated States. Estimated prevalence rates of food insecurity during this 3-year period ranged from 7.4 percent in New Hampshire to 18.9 percent in Arkansas; estimated prevalence rates of very low food security ranged from 3.2 percent in Iowa, Massachusetts, New Hampshire, New Jersey, and North Dakota to 7.0 percent in South Carolina (table 4).²⁶

The margin of error for State food insecurity rates should be considered when interpreting these statistics, especially when comparing prevalence rates across States. The margin of error reflects the sampling variation or the uncertainty associated with estimates that are based on information from a limited number of households in each State.²⁷ Margins of error indicate the range of values (above or below the estimated prevalence rate) where, in repeated sampling, USDA's Economic Research Service expects to see the true prevalence rate 90 percent of the time (table 4). For example, considering the margins of error, it is not certain that the prevalence of very low food security was higher in South Carolina than in six other States (i.e., Georgia, Indiana, New Mexico, Nevada, Ohio, and Wyoming).

Taking into account margins of error of the State and U.S. estimates for the 3-year period of 2021–23, the prevalence of food insecurity was higher (i.e., statistically significantly higher) than the national average in 7 States (i.e., Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, South Carolina, and Texas) and lower than the national average in 17 States (i.e., California, Colorado, Hawaii, Iowa, Massachusetts, Maryland, Minnesota, North Dakota, New Hampshire, New Jersey, Pennsylvania, Rhode Island, South Dakota, Virginia, Vermont, Washington, and Wisconsin) and Washington, DC.²⁸ In the remaining 26 States, differences from the national average were not statistically significant. The prevalence of very low food security was higher than the national average in 6 States (i.e., Arkansas, Kentucky, Louisiana, Mississippi, South Carolina, and Texas), lower than the national average in 13 States (i.e., California, Colorado, Hawaii, Iowa, Massachusetts, Maryland, Minnesota, North Dakota, New Hampshire, New Jersey, Pennsylvania, Vermont, and Washington), and not significantly different from the national average in 31 States and Washington, DC.

²⁶ A map of the States showing the prevalence of food insecurity for 2021–23 can be downloaded from the USDA, Economic Research Service's website.

²⁷ Margin of error is calculated as 1.645 times the standard error of the estimated prevalence rate. Standard errors were estimated using balanced repeated replication (BRR) methods based on replicate weights for the Census Bureau's Current Population Survey Food Security Supplement.

²⁸ Standard error of difference assumes that there is no correlation between national and individual State estimates.

Table 4

Prevalence of household food insecurity and very low food security by State and Washington, DC, average 2021–23

State	Number of households		Food insecurity (low or very low food security)		Very low food security	
	Average 2021–23 ¹	Interviewed	Prevalence	Margin of error ²	Prevalence	Margin of error ²
	Number	Number	Percent	Percentage points	Percent	Percentage points
U.S.	132,435,000	93,002	12.2	0.22	4.7	0.14
AK	279,000	1,116	10.4	2.40	5.3	1.54
AL	2,090,000	1,831	11.5	2.32	4.4	1.18
AR	1,283,000	1,743	18.9*	1.57	6.7*	0.96
AZ	2,962,000	1,393	11.8	1.67	4.7	0.99
CA	14,040,000	8,019	11.4*	0.73	4.1*	0.46
CO	2,403,000	1,033	9.9*	2.00	3.4*	0.92
CT	1,445,000	863	10.4	1.91	4.4	1.39
DC	332,000	1,840	8.8*	1.64	3.8	1.04
DE	405,000	1,120	11.3	2.10	4.0	1.23
FL	9,254,000	3,803	12.0	1.05	4.4	0.57
GA	4,278,000	1,822	12.8	1.76	5.1	1.03
HI	496,000	1,380	9.6*	1.66	3.6*	1.08
IA	1,356,000	1,195	9.8*	2.00	3.2*	0.99
ID	750,000	1,640	11.3	1.62	4.4	0.87
IL	5,098,000	2,558	12.4	1.34	4.7	0.79
IN	2,809,000	1,623	12.2	1.52	5.3	0.98
KS	1,159,000	1,253	10.6	1.58	3.9	0.94
KY	1,787,000	1,076	14.5*	2.19	6.5*	1.54
LA	1,867,000	1,976	16.2*	2.09	6.1*	1.35
MA	2,781,000	1,897	9.3*	1.28	3.2*	0.73
MD	2,297,000	1,188	10.4*	1.70	3.3*	0.92
ME	590,000	831	10.9	2.08	4.4	1.19
MI	4,155,000	2,259	13.0	1.71	5.3	1.01
MN	2,299,000	1,357	9.1*	1.61	3.4*	1.05
MO	2,587,000	1,516	12.7	1.98	5.8	1.14
MS	1,202,000	1,869	16.2*	2.15	6.1*	0.89
MT	492,000	1,629	10.6	1.82	4.2	0.92
NC	4,399,000	1,975	10.9	1.47	4.0	0.78
ND	329,000	1,545	8.6*	1.66	3.2*	0.93
NE	817,000	1,020	12.9	2.21	6.0	1.44
NH	571,000	1,371	7.4*	1.67	3.2*	1.13
NJ	3,541,000	1,716	9.8*	1.32	3.2*	0.90
NM	870,000	1,622	12.9	1.39	5.0	1.07
NV	1,257,000	1,207	12.5	2.05	4.9	1.21
NY	7,760,000	3,436	12.3	1.02	4.7	0.69
OH	4,951,000	2,396	12.8	1.57	5.3	1.04
OK	1,608,000	1,371	15.4*	1.98	5.7	1.18
OR	1,740,000	1,690	12.8	2.42	5.8	1.28
PA	5,244,000	2,602	10.8*	1.24	3.9*	0.73
RI	444,000	822	9.7*	2.34	4.3	1.58
SC	2,236,000	1,452	14.4*	1.95	7.0*	1.34
SD	375,000	1,166	9.0*	1.40	3.8	1.19
TN	2,975,000	1,874	11.7	1.86	4.7	1.25
TX	11,306,000	4,776	16.9*	0.93	6.4*	0.60
UT	1,155,000	1,332	11.8	1.52	4.6	0.95
VA	3,442,000	1,652	10.0*	1.60	4.6	1.00
VT	291,000	1,413	9.2*	1.66	3.4*	1.06
WA	3,151,000	1,879	9.5*	1.21	3.7*	0.88
WI	2,501,000	1,649	10.7*	1.48	3.9	0.88
WV	741,000	1,766	13.7	2.52	4.1	0.95
WY	234,000	1,440	13.1	2.07	5.2	1.16

Note: The asterisk (*) denotes the difference from U.S. average was statistically significant with 90-percent confidence ($t > 1.645$). Standard error of differences assumes no correlation between national and individual State estimates.

¹Totals excluded households for which food security status was unknown because household respondents did not give a valid response to any of the questions in the food security scale. These exclusions represented about 0.2 percent of all households in 2021, 0.2 percent in 2022, and 0.1 percent in 2023.

²Margin of error with 90-percent confidence (1.645 times the standard error of the estimated prevalence rate). Standard errors were estimated using balanced repeated replication (BRR) methods based on replicate weights for the U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplement.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2021, 2022, and 2023 Current Population Survey Food Security Supplements data.

State-level rates of food insecurity and very low food security for 2021–2023 are compared with 2018–2020 and 2011–2013 averages (table 5). Prevalence rates for the preceding 3-year period of 2018–2020 are from *Household Food Security in the United States in 2020* (Coleman-Jensen et al., 2021). The 2011–2013 rates are from *Household Food Security in the United States in 2013* (Coleman-Jensen et al., 2014) and are presented as a baseline to assess changes in State-level food security conditions over the past decade.²⁹

Statistically significant increases in the State-level prevalence of food insecurity occurred from the periods 2018–2020 to 2021–2023 in Arkansas, California, Florida, Georgia, Illinois, Iowa, New York, Oregon, South Carolina, and Texas (table 5). There were no State-level decreases in the prevalence of food insecurity between the periods 2018–2020 and 2021–2023. During the same period, a statistically significant increase occurred in the prevalence of very low food security in South Carolina, California, New York, Oregon, Texas, and Utah, while there were no statistically significant decreases in the prevalence of very low food security.

Across the decade, there were no statistically significant percentage point increases in the prevalence of food insecurity from the periods 2011–2013 to 2021–2023. There were statistically significant declines in 25 States and Washington, DC (table 5). The prevalence of very low food security increased statistically significantly from the periods 2011–2013 to 2021–2023 in South Carolina, with statistically significant declines in 18 States (table 5). Changes that were not marked as statistically significant (*) in table 5 were within ranges that could have resulted from sampling variation (that is, a nonzero difference between sample estimates, based on the households that happened to be chosen for the sample, which was consistent with no actual change in food security in the State’s general population).

²⁹ Prevalence rates for 1996–98 reported in *Prevalence of Food Insecurity and Hunger, by State, 1996–98* (Nord et al., 1999) are not directly comparable with the rates reported here because of differences in screening procedures in the U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements from 1995 to 1998. Statistics for 1996–98, adjusted to be comparable with those for recent years, are presented in *Statistical Supplement to Food Security in the United States in 2010*, table S-4 (Coleman-Jensen et al., 2011).

Table 5

Change in prevalence of household food insecurity and very low food security by State and the District of Columbia: 2021–2023 (average), 2018–2020 (average), and 2011–2013 (average) ¹

State	Food insecurity (low or very low food security)					Very low food security				
	Average	Average	Average	Change	Change	Average	Average	Average	Change	Change
	2021–2023	2018–2020	2011–2013	2018–2020 to 2011–2013 to	2011–2013 to 2021–2023	2021–2023	2018–2020	2011–2013	2018–2020 to 2011–2013 to	2011–2013 to 2021–2023
-----Percent-----			Percentage points		-----Percent-----			Percentage points		
U.S.	12.2	10.7	14.6	1.5*	-2.4*	4.7	4.1	5.7	0.6*	-1.0*
AK	10.4	10.6	11.8	-0.2	-1.4	5.3	5.1	4.5	0.2	0.8
AL	11.5	14.0	16.7	-2.5	-5.2*	4.4	5.2	7.0	-0.8	-2.6*
AR	18.9	12.6	21.2	6.3*	-2.3	6.7	5.9	8.4	0.8	-1.7
AZ	11.8	11.0	15.6	0.8	-3.8*	4.7	3.8	6.3	0.9	-1.6*
CA	11.4	9.8	15.0	1.6*	-3.6*	4.1	3.3	5.6	0.8*	-1.5*
CO	9.9	10.1	13.9	-0.2	-4.0*	3.4	4.3	5.5	-0.9	-2.1*
CT	10.4	11.8	13.4	-1.4	-3.0*	4.4	4.9	5.0	-0.5	-0.6
DC	8.8	10.3	13.4	-1.5	-4.6*	3.8	3.6	5.2	0.2	-1.4
DE	11.3	9.9	12.9	1.4	-1.6	4.0	4.2	5.1	-0.2	-1.1
FL	12.0	10.1	14.1	1.9*	-2.1*	4.4	4.2	5.9	0.2	-1.5*
GA	12.8	10.0	16.6	2.8*	-3.8*	5.1	3.8	6.0	1.3	-0.9
HI	9.6	8.9	12.9	0.7	-3.3*	3.6	3.1	4.7	0.5	-1.1
IA	9.8	6.9	11.9	2.9*	-2.1	3.2	3.1	4.4	0.1	-1.2*
ID	11.3	9.6	15.1	1.7	-3.8*	4.4	3.6	5.9	0.8	-1.5*
IL	12.4	9.2	12.5	3.2*	-0.1	4.7	3.9	4.4	0.8	0.3
IN	12.2	11.6	14.1	0.6	-1.9	5.3	4.4	6.1	0.9	-0.8
KS	10.6	11.3	15.2	-0.7	-4.6*	3.9	5.1	6.0	-1.2	-2.1*
KY	14.5	13.8	16.4	0.7	-1.9	6.5	4.9	6.7	1.6	-0.2
LA	16.2	14.8	16.5	1.4	-0.3	6.1	6.5	5.5	-0.4	0.6
MA	9.3	8.4	10.6	0.9	-1.3	3.2	3.4	3.9	-0.2	-0.7
MD	10.4	9.2	13.3	1.2	-2.9*	3.3	3.6	4.9	-0.3	-1.6*
ME	10.9	11.4	15.1	-0.5	-4.2*	4.4	5.5	7.1	-1.1	-2.7*
MI	13.0	11.8	13.9	1.2	-0.9	5.3	4.7	5.7	0.6	-0.4
MN	9.1	7.0	10.8	2.1	-1.7	3.4	2.3	4.4	1.1	-1.0
MO	12.7	11.5	16.9	1.2	-4.2*	5.8	5.1	8.1	0.7	-2.3*
MS	16.2	15.3	21.1	0.9	-4.9*	6.1	5.9	7.2	0.2	-1.1
MT	10.6	10.4	11.8	0.2	-1.2	4.2	4.5	4.9	-0.3	-0.7
NC	10.9	12.1	17.3	-1.2	-6.4*	4.0	3.7	6.3	0.3	-2.3*
ND	8.6	7.9	8.7	0.7	-0.1	3.2	2.5	3.1	0.7	0.1
NE	12.9	10.5	13.8	2.4	-0.9	6.0	4.4	5.2	1.6	0.8
NH	7.4	5.7	10.2	1.7	-2.8*	3.2	2.4	4.6	0.8	-1.4
NJ	9.8	8.4	11.4	1.4	-1.6	3.2	3.1	4.8	0.1	-1.6*
NM	12.9	13.4	13.2	-0.5	-0.3	5.0	5.3	5.1	-0.3	-0.1
NV	12.5	11.9	16.2	0.6	-3.7*	4.9	4.8	6.9	0.1	-2.0*
NY	12.3	10.5	14.0	1.8*	-1.7*	4.7	3.7	5.2	1.0*	-0.5
OH	12.8	11.6	16.0	1.2	-3.2*	5.3	5.0	7.2	0.3	-1.9*
OK	15.4	14.6	15.5	0.8	-0.1	5.7	4.5	6.7	1.2	-1.0
OR	12.8	9.2	15.2	3.6*	-2.4	5.8	3.9	6.1	1.9*	-0.3
PA	10.8	9.9	11.9	0.9	-1.1	3.9	4.2	4.8	-0.3	-0.9
RI	9.7	8.2	14.4	1.5	-4.7*	4.3	2.9	4.6	1.4	-0.3
SC	14.4	11.2	14.1	3.2*	0.3	7.0	4.4	5.3	2.6*	1.7*
SD	9.0	9.1	12.6	-0.1	-3.6*	3.8	3.9	4.6	-0.1	-0.8
TN	11.7	12.5	17.4	-0.8	-5.7*	4.7	5.3	7.0	-0.6	-2.3*
TX	16.9	13.3	18.0	3.6*	-1.1	6.4	4.9	6.3	1.5*	0.1
UT	11.8	10.0	14.3	1.8	-2.5*	4.6	3.0	4.6	1.6*	0.0
VA	10.0	8.5	9.5	1.5	0.5	4.6	3.8	3.8	0.8	0.8
VT	9.2	8.6	13.2	0.6	-4.0*	3.4	2.8	6.1	0.6	-2.7*
WA	9.5	8.8	14.3	0.7	-4.8*	3.7	3.4	5.6	0.3	-1.9*
WI	10.7	9.7	11.6	1.0	-0.9	3.9	3.1	5.0	0.8	-1.1
WV	13.7	15.1	14.4	-1.4	-0.7	4.1	5.7	5.1	-1.6	-1.0
WY	13.1	11.5	14.6	1.6	-1.5	5.2	4.9	5.5	0.3	-0.3

Note: The asterisk (*) denotes that change was statistically significant, with 90-percent confidence ($t > 1.645$).

¹Percentages exclude households for which food security status is unknown because household respondents did not give a valid response to any of the questions in the food security scale.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, Current Population Survey Food Security Supplements data.

Household Spending on Food

Food insecurity arises from a lack of money and other resources to acquire food. Most households purchase much of their food from supermarkets or grocery stores; some food also comes from cafeterias, restaurants, vending machines, or other types of channels. Families with children may also get food from schools and childcare. The amount of money a household spends on food is one indicator for how adequately the household is meeting its food needs.³⁰ When a household reduces food spending below a minimum level, such as those defined in USDA's Thrifty Food Plan (TFP), because of constrained resources, disrupted eating patterns and reduced food intake may result. The following section provides information on how much households spent on food, as reported in the December 2023 CPS-FSS.

Methods

The household food expenditure statistics in this report are based on usual weekly spending for food, as reported by December 2023 CPS-FSS respondents after reflecting on the household's actual food spending during the previous week. Usual weekly food spending is used to measure household weekly food spending for these analyses because it is more likely to capture a household's typical weekly food spending during the last 12 months, allowing for better alignment with the annual food security measure. By using usual weekly food spending, concerns about the seasonality of food spending may also be mitigated. Respondents were first asked to report the amounts of money their households spent on food in the week before the interview, including purchases made with SNAP benefits at:

- Supermarkets, grocery stores, Walmart, and Target;
- Stores other than supermarkets and grocery stores, such as dollar stores, pharmacies, club stores, farmers' markets, and online;
- Restaurants, fast-food places, cafeterias, delis, convenience stores, and vending machines; and
- "Any other kind of place."³¹

Total spending for food, based on responses to this series of questions, was verified with the respondent. The respondent was then asked how much the household usually spent on food during a week.³² USDA, Economic Research Service (ERS) analyses showed that usual 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 & Rose, 1996; Nord, 2009b).

³⁰ Food spending is only an indirect indicator of food consumption. It understates food consumption in households that receive food from in-kind programs such as the National School Lunch and School Breakfast Programs, WIC, meal programs for children in childcare and for older adults, and private charitable organizations such as food pantries. Purchases with SNAP benefits, however, are counted as food spending in the Current Population Survey Food Security Supplement. Food spending in 2023 likely included Pandemic Electronic Benefits Transfer (P-EBT), though it was not specifically mentioned because it was delivered similarly to regular SNAP benefits. 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 obtain groceries from friends or relatives or eat more meals at friends' or relatives' homes than they provide to friends or relatives. Food spending also understates food consumption in geographical areas with relatively low food prices and overstates consumption in areas with relatively high food prices.

³¹ 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, alcohol, detergents, or cleaning supplies." These amounts are subtracted from total spending at each of these stores to arrive at spending for food.

³² Beginning with the Census Bureau's 2015 Current Population Survey Food Security Supplement, food-spending amounts are categorized in public-use data. Categorizing the dollar amounts reduces the risk of disclosure and is now standard for data collected by the Census Bureau. The USDA, Economic Research Service analysis, using the midpoints of the expenditure ranges to approximate the household's food expenditure as a continuous measure, suggested this change has had little effect on the estimates of median food spending reported in the annual food security reports. The tables presented in this section were based on the categorical food-spending data.

Usual food spending was adjusted for household size and composition in two ways. First, researchers divided each household’s usual weekly food expenditure by the number of household members, yielding the “usual weekly food spending per person” for that household. The second adjustment more precisely accounts for the different food needs of households by comparing each household’s usual food spending with the estimated cost of the USDA’s Thrifty Food Plan (TFP) for that household in December 2023.³³ TFP serves as a national standard for a nutritious, practical, cost-effective diet. It represents a set of “market baskets” of foods and beverages that people in specific age and sex categories could commonly consume at home that are lower in price and of higher nutritional quality to maintain a healthful diet that meets current dietary standards, considering the food consumption patterns of U.S. households. In addition to its use as a research tool, TFP has been used as a basis for setting the maximum SNAP benefit amounts (U.S. Department of Agriculture (USDA), 2021). Each household’s reported usual weekly food spending was divided by the household-specific cost of the TFP, based on the age- and gender-specific cost of the TFP for each household member and the number of persons in the household (USDA, Center for Nutrition Policy and Promotion, 2024).³⁴

The medians of each of the two food-spending measures (spending per person per week and total weekly spending relative to the cost of the December 2023 TFP) were estimated at the national level and for households in various categories (table 6). Medians were reported rather than averages (means) because medians were less affected by the few unexpectedly high values of usual food spending that were believed to be reporting or data-entry errors. Thus, the median can better reflect what a typical household spent.

The TFP was revised significantly in 2021 due to a reevaluation by USDA as required by the 2018 Farm Bill. The reevaluation was based on current food prices, food composition data, consumption patterns, and dietary guidance. Before the updates to TFP, it was constrained to not allow cost changes of the TFP beyond inflation adjustments. The 2021 reevaluation did not have that cost constraint. The resulting 2021 TFP was a 21-percent increase in cost from the previous version after adjusting for current prices (USDA, 2021). Because of this TFP change, estimates of household spending relative to the cost of the TFP for 2023 shown here are comparable with 2021–22 estimates but are not comparable with years before 2021. Median food expenditures per person reported here were not affected by the TFP change and have remained comparable across all years.

About 5.7 percent of households interviewed in the CPS-FSS did not respond to the food-spending questions (or reported zero usual food spending) and were excluded from the analysis. As a result, the total number of households represented in tables 6 and 7 is smaller than in tables 1 and 2. Food-spending estimates may not be fully representative of all households in the United States.³⁵

Food Expenditures by Selected Household Characteristics

In 2023, the typical U.S. household spent \$75.00 per person per week for food (table 6). The median household food spending relative to the TFP cost, which adjusts for food price inflation and adjusts more precisely for the food needs of persons in different age-gender categories, was 1.17 (a ratio of household food spending relative to the TFP that if above 1.0, indicates the household spends more than the TFP cost; a ratio below 1.0 means the household spends less than the TFP cost). That is, in 2023, the typical household spent 17 percent more on food than the cost of the TFP for that household. For instance, in December 2023, the weekly cost of the TFP for a family of four that included an adult male and female, each aged 20–50, and two children

³³ The cost of the Thrifty Food Plan (TFP) is revised each month to account for inflation in food prices and was revised significantly in 2021 (U.S. Department of Agriculture, 2021). For this report, TFP costs are estimated by USDA, ERS separately for Alaska and Hawaii, using adjustment factors calculated from SNAP fiscal year 2024 maximum monthly allotments for those States.

³⁴ The cost of a TFP for a household is calculated under the assumption that all food purchased by household members is shared.

³⁵ Households that were unable or unwilling to report food spending were less likely to be food insecure than those that did report food spending (10.5 percent compared with 13.8 percent). Food spending may, therefore, be slightly underestimated from these data.

aged 6–8 and 9–11 was \$223.60 (USDA, Center for Nutrition Policy and Promotion, 2024). If a sampled household in the CPS-FSS with those same characteristics (family of four composed of two adults aged 20–50 and two children aged 6–8 and 9–11), reported weekly food spending that was 17 percent more than the TFP cost, they would be spending about \$38.00 more on food for their household for the week than the TFP cost (i.e., a total of about \$262.00). Food spending relative to the cost of the TFP in 2023 (ratio of 1.17), was up from food spending relative to the cost of the TFP in 2022 (ratio of 1.12).

Households with children under the age of 18 generally spent less on food than those without children, relative to the cost of the TFP. Conversely, those without children spent more relative to the estimated needed food spending for their household size and composition based on the USDA's TFP. The typical household with children spent 3 percent more than the cost of the TFP on food, whereas the typical household with no children spent 21 percent more. Median household food expenditures relative to the TFP cost were lower for households with children headed by single women (ratio of 0.97) and single men (ratio of 0.99) than for married couples with children (ratio of 1.05). Median food expenditures relative to the TFP cost were highest for men living alone and women living alone (ratio of 1.36 and 1.32, respectively).

Median food expenditures relative to the cost of the TFP were lower for households with Black, non-Hispanic (ratio of 1.05) and Hispanic reference persons (ratio of 1.05) than for households with a White, non-Hispanic reference person (ratio of 1.20). This pattern was consistent with the lower average incomes and higher prevalence rates of food insecurity for these racial and ethnic groups.

Households with higher incomes spent more money on food than did lower-income households.³⁶ The typical household with income below the poverty line spent about 8 percent less than the cost of the TFP, whereas the typical household with income at or above 185 percent of the poverty line spent 24 percent more than the cost of the TFP.

Median food spending relative to the cost of the TFP was lower than the national average (ratio of 1.17) for households in nonmetropolitan areas (ratio of 1.05) and higher for those in principal cities (ratio of 1.20). Households in nonmetropolitan areas spent less money on food than did metropolitan households. Regionally, median spending on food relative to the cost of the TFP was lower than the national average in the Midwest (ratio of 1.13) and the South (ratio of 1.13) and higher for those in the Northeast (ratio of 1.21) and West (ratio of 1.20). Median food spending was lower in the Midwest and South than in the Northeast and West.

³⁶ However, food spending does not rise proportionately with income, so high-income households spend a smaller proportion of their income on food than low-income households. In 2020, households with incomes in the lowest income quintile spent about \$4,000 on food annually, representing about 27 percent of their income. Meanwhile, households with incomes in the highest quintile spent about \$12,000 on food, representing about 7 percent of their annual income (MacLachlan & Lowe, 2021).

Table 6

Weekly household food spending per person and relative to the household cost of the Thrifty Food Plan (TFP), 2023

Category	Number of households ¹	Median weekly food spending	
		Per person	Relative to household cost of December 2023 TFP ²
		Dollars	Ratio
All households	1,000 123,769	75.00	1.17
Household composition			
With children < 18 years	34,431	57.50	1.03
At least one child < 6 years	13,783	50.00	1.05
Married-couple families	22,774	58.33	1.05
Female head, no spouse	8,287	50.00	0.97
Male head, no spouse	2,975	57.14	0.99
Other household with child ³	395	NA	NA
With no children < 18 years	89,337	80.00	1.21
More than one adult	52,686	75.00	1.15
Women living alone	19,766	90.00	1.32
Men living alone	16,884	100.00	1.36
With an adult age 65+	40,167	70.00	1.13
Adult age 65+ living alone	14,905	80.00	1.18
Race/ethnicity of household reference persons			
White, non-Hispanic	79,990	75.00	1.20
Black, non-Hispanic	15,586	65.00	1.05
Hispanic ⁴	18,245	63.33	1.05
Other, non-Hispanic	9,948	72.50	1.14
Household income-to-poverty ratio			
Under 1.00	10,817	57.14	0.92
Under 1.30	15,445	55.00	0.90
Under 1.85	25,589	57.50	0.93
1.85 and over	75,165	80.00	1.24
Income unknown	23,015	70.00	1.09
Area of residence ⁵			
Inside metropolitan area	106,269	75.00	1.18
In principal cities ⁶	34,714	75.00	1.20
Not in principal cities	55,370	75.00	1.19
Outside metropolitan area	17,500	65.00	1.05
Census geographic region			
Northeast	20,988	75.00	1.21
Midwest	26,772	70.00	1.13
South	48,147	70.00	1.13
West	27,862	75.00	1.20

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

¹Totals exclude households that did not answer the questions about spending on food or reported zero usual food spending. These exclusions represented 6.7 percent of all households.

²Estimates of median weekly food spending, relative to the household cost of the TFP for December 2023, are not comparable to estimates for years before 2021. This is because the cost of the TFP was revised in 2021 to reflect updated data on food prices, food composition, and consumption patterns, and current dietary guidance.

³Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

⁴Hispanic respondents may be of any race.

⁵Metropolitan area residence is based on 2013 Office of Management and Budget delineation.

⁶Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 15 percent of households in metropolitan statistical areas.

Note: These estimates are based on categorical food spending data rather than on continuous data that were used in 2014 and earlier years. Beginning with the 2015 Current Population Survey Food Security Supplement, food spending amounts are categorized in public-use data.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Food Expenditures and Household Food Security

Food-secure households typically spent more on food than did food-insecure households. The ratio for median food spending relative to the cost of the TFP was 1.18 among food-secure households in 2023, compared with 1.02 among food-insecure households (table 7). Thus, considering estimated food need based on household size and composition, the median food-secure household spent 16 percent more for food than the median food-insecure household (estimated as $1.18 \div 1.02 = 1.16$).³⁷ Statistical Supplement table S-10 provides more information on food spending by food-secure and food-insecure households by household characteristics (Rabbitt et al., 2024).

Table 7

Weekly household food spending per person and relative to the cost of the Thrifty Food Plan (TFP) by food security status, 2023

Category	Number of households ¹	Median weekly food spending	
		Per person	Relative to cost of December 2023 TFP ²
	1,000	Dollars	Ratio
All households	123,769	75.00	1.17
Food security status			
Food-secure households	106,671	75.00	1.18
Food-insecure households	17,024	60.00	1.02
Households with low food security	10,583	60.00	1.04
Households with very low food security	6,441	60.00	0.98

¹Total for all households excludes households that did not answer the questions about spending on food or that reported zero usual spending for food. These exclusions represented 6.7 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.

²Estimates of median weekly food spending, relative to the household cost of the TFP for December 2023, are not comparable to estimates for years before 2021. This is because the cost of the TFP was revised in 2021 to reflect updated data on food prices, food composition, and consumption patterns, and current dietary guidance.

Note: These estimates are based on categorical food spending data rather than on continuous data that was used in 2014 and earlier years. Beginning with the 2015 Current Population Survey Food Security Supplement, food spending amounts are categorized in public-use data.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Federal Food and Nutrition Assistance Programs and Food Security

Households with limited resources use a variety of methods to acquire adequate food. Some participate in Federal food and nutrition assistance programs or obtain food from charitable organizations in their communities to supplement purchased food. Households that turn to Federal and community food and nutrition assistance programs typically do so because they are having difficulty meeting their food needs. The use of such programs by low-income households provides insight into the extent of these households' difficulties in obtaining enough food. The relationship between food security status and the use of food and nutrition assistance programs also provides insight into how low-income households cope with difficulties in acquiring adequate food.

³⁷ The pattern of higher food spending among food-secure households compared with food-insecure households was also found in USDA's National Household Food Acquisition and Purchase Survey (FoodAPS) data (Tiehn et al., 2017).

This section presents information about the food security status of low-income households that participated in the three largest Federal food and nutrition assistance programs including SNAP; free or reduced-price school lunch from the National School Lunch Program (NSLP); and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (see box, “Federal Food and Nutrition Assistance Programs,” page 37). It also provides information about the extent to which food-insecure households participated in these programs. This report does not describe total participation in the Federal food and nutrition assistance programs, participation rates of eligible households in those programs, and characteristics of participants in the programs. Extensive information on those topics is available from USDA’s Food and Nutrition Service (FNS).³⁸ The USDA implemented additional food and nutrition assistance programs and flexibilities in 2020 in response to the Coronavirus (COVID-19) pandemic and continued some of them in 2023. For the most updated information on these programs, see the USDA and USDA, Food and Nutrition Service (FNS) websites, and Jones and Toossi (2024). Additional information on COVID-19-related changes and flexibilities in nutrition assistance programs is described in Jones et al. (2022).

Statistical Supplement tables S-11 to S-16 provide information on food spending by participants and low-income nonparticipants in selected Federal and community food and nutrition assistance programs and on the extent to which households obtained free groceries and free meals from charitable organizations (Rabbitt et al., 2024).

³⁸ Additional research findings on the operations and effectiveness of these programs are available from the USDA, Economic Research Service website.

Federal Food and Nutrition Assistance Programs

The U.S. Department of Agriculture's Food and Nutrition Service (FNS) administers 16 domestic food and nutrition assistance programs. The three largest programs are:

- The Supplemental Nutrition Assistance Program (SNAP), which provides monthly benefits to eligible low-income households to purchase food items at SNAP-authorized retailers. SNAP is available to all individuals who meet financial and nonfinancial eligibility criteria. In an average month of fiscal year (FY) 2023 (October 1, 2022, through September 30, 2023), SNAP provided benefits to 41.1 million people in the United States (about 12.4 percent of individuals). The average benefit was about \$211.00 per person per month, and Federal expenditures for the program were \$112.9 billion that year. In FY 2022 (which began October 1, 2021), maximum SNAP benefits were permanently increased because of the revision of the Thrifty Food Plan that forms the basis for maximum SNAP benefits (U.S. Department of Agriculture (USDA), 2021).
- The National School Lunch Program (NSLP), which operates in more than 97,000 public and nonprofit private schools and residential childcare institutions. All children attending participating schools are eligible to receive lunch, with lunches available for free to low-income children or at a reduced price. Schools are reimbursed by the USDA for all meals served under the program on a sliding scale based on whether meals are free, reduced price, or full price. Before the 2019 Coronavirus (COVID-19) pandemic, typical school lunch participation was nearly 30 million children on an average school day. However, it is not possible to compare the NSLP participation rate in FY 2023 to the years before 2021 due to how meals were served or provided to children during the school years affected by the COVID-19 pandemic. This continued to a lesser extent in 2023, as States had the option to request waivers to ease the transition back to normal operations (e.g., congregate meal waiver in NSLP). In total, 8.8 billion meals were served across the National School Lunch and Breakfast Programs, Child and Adult Care Food Program, and Summer Food Service Program. Some children may also have received Pandemic Electronic Benefits Transfer (P-EBT), or temporary emergency nutrition benefits loaded on Electronic Benefits Transfer (EBT) cards used to purchase food. Children who would have received free or reduced-price meals but whose schools were closed or operated with reduced hours or attendance for at least 5 consecutive days were eligible to receive P-EBT benefits.
- The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which is a federally funded nutrition program that provides grants to States to support the distribution of supplemental foods, health care referrals, and nutrition education to safeguard the health of low-income pregnant, breastfeeding, and nonbreastfeeding postpartum women; for infants in low-income families; and for children younger than age 5 in low-income families and who are found to be at nutritional risk. Most State WIC agencies have replaced paper vouchers with the WIC-EBT system. Benefits are issued to participants on WIC-EBT cards for redemption at WIC-authorized grocery stores. In FY 2023, WIC served about 6.5 million participants per month at an average monthly cost for food (after rebates to WIC from manufacturers) of about \$56.00 per person.

Methods

The December 2023 CPS-FSS included questions about the use of Federal food and nutrition assistance programs. All households with reported annual incomes below 185 percent of the Federal poverty threshold were asked these questions. To minimize respondent burden, households with annual incomes above that range were not asked the questions unless they indicated some level of difficulty in meeting their food needs on one of the two preliminary screener questions asked of all households (listed in the Household Food Security Methods section earlier in this report).

The questions analyzed in this section regarding SNAP participation are:

- In the past 12 months, since December of last year, did anyone in this household get SNAP or food stamp benefits?³⁹

Households that responded affirmatively were then asked:

- In which months of 2023 were SNAP or food stamp benefits received?

Households that reported participation in November, but not December, were then asked:

- On what date in November did your household receive SNAP or food stamp benefits?

Information from the three questions was used to identify the number of months SNAP benefits were received in the prior year, as well as whether households received SNAP benefits in the 30 days before the survey (mid-November to mid-December 2023).⁴⁰

Questions about NSLP and WIC are also analyzed here. These questions are:

- During the past 30 days, did any children in the household (between 5 and 18 years old) receive free or reduced-price lunches at school? (Only households with children between the ages of 5 and 18 were asked this question.);⁴¹ and
- During the past 30 days, did any women or children in this household get food through the WIC program? (Only households with a child under age 5 or a woman aged 15–45 were asked this question.)

Prevalence rates of food security, food insecurity, and very low food security were calculated for households reporting use of each food and nutrition assistance program and for comparison groups of nonparticipating households with incomes and household compositions similar to those of food and nutrition assistance program participants. Statistics shown in tables 8 and 9 are based on the 12-month food security measure, and sensitivity checks reported in the text and footnotes use the 30-day food security measure. Statistics for participating households excluded households with annual incomes above the ranges specified for the comparison

³⁹ The Food Stamp Program was renamed SNAP in October 2008. The survey mentions both names in the question, as well as the State's name for the program in States that used a different name.

⁴⁰ The Current Population Survey household does not always match the SNAP unit. In some households, only some members are eligible for SNAP (Czajka et al., 2012; Scherpf et al., 2015).

⁴¹ Because of the Coronavirus (COVID-19) pandemic and school closures, students learning virtually and/or quarantining may have received free school meals through school grab n' go meal pick-up sites, but due to social distancing requirements, the meals were consumed elsewhere. This continued in 2023; however, the extent of its use was likely less than in 2020–21. It is unclear how respondents may have interpreted this question in 2020–23 if free or reduced-price lunches were not received by children "at school." The survey questions did not ask directly about participation in Pandemic Electronic Benefits Transfer (P-EBT), and it is unlikely that respondents would have reported P-EBT receipt in response to the question about free or reduced-price lunches received at school.

groups.⁴² An income cutoff of less than 130 percent of the Federal poverty line includes most SNAP participants (USDA, FNS, 2022). The income ranges for free or reduced-price school lunch and WIC are set at 185 percent of the poverty threshold to match the gross income eligibility limits for those programs. The proportions of food-insecure households participating in each of the largest Federal food and nutrition assistance programs (i.e., SNAP, NSLP, and WIC) were calculated, as well as the proportion of food-insecure households that participated in any of the three programs.

Food Security of Households That Received Food and Nutrition Assistance

The relationship between food security and the use of food and nutrition assistance programs is complex. Households that reported using food and nutrition assistance programs in a one-time survey could either be more food secure or less food secure than low-income households not using those programs. Since the programs have provided food and other resources to reduce the severity of food insecurity, households were expected to be more food secure after receiving program benefits than they were before. However, more food-insecure households (those having greater difficulty meeting their food needs) have sought assistance from the programs. Numerous studies confirmed this self-selection into SNAP and other food and nutrition assistance programs. When adequately accounted for self-selection into SNAP, it became apparent that SNAP improves food security.⁴³ In 2023, an estimated 51.9 percent of households that received SNAP benefits were food insecure, as were 43.7 percent of households that received free or reduced-price school lunches and 37.0 percent of those that received WIC benefits (table 8).

The prevalence of very low food security among households participating in SNAP was 22.4 percent. For households that received free or reduced-price school lunches, the prevalence of very low food security was 15.3 percent, and for households that received WIC, the prevalence was 14.0 percent.

A possible complicating factor in interpreting table 8 for school lunch and WIC participation is that food insecurity was measured over 12 months, while program participation was measured over 30 days. An episode of food insecurity may have occurred at a different time during the year than the use of a specific nutrition assistance program. A similar tabulation using a 30-day measure of food insecurity largely overcomes this potential problem because measured food insecurity and reported use of food and nutrition assistance programs are both referenced to the previous 30 days. That tabulation showed patterns of food insecurity and the use of food and nutrition assistance programs that were generally similar to those using the 12-month food insecurity measure in table 8, although 30-day food insecurity prevalence rates were lower than the corresponding 12-month rates (see Statistical Supplement table S-15, Rabbitt et al., 2024).

⁴² Some program participants reported annual incomes higher than 12 times the program eligibility criteria, which are based on monthly income (relative to poverty). They may have had monthly incomes below the monthly eligibility threshold during part of the year, or subfamilies within the household may have had incomes low enough to have been eligible.

⁴³ This “self-selection” effect is evident in the association between food security and nutrition assistance program participation observed in the food security survey. Participating households were less food secure than similar nonparticipating households. Research that uses methods to account for this self-targeting is required to assess the extent to which the programs improve food security. See Gregory et al. (2015) for a review of this literature and these methods; also see Gundersen et al. (2017), Mabli et al. (2013), Nord (2013), Nord (2012), Nord and Prell (2011), Rabbitt (2014), Rabbitt (2018), Ratcliffe and McKernan (2011), Nord and Golla (2009), Yen et al. (2008), Wilde and Nord (2005), Gundersen and Oliveira (2001), Gundersen and Gruber (2001), and Nelson et al. (1998). Overall, these studies found that SNAP improved food security.

Table 8

Percentage of U.S. households by food security status and participation in selected Federal food and nutrition assistance programs, 2023

Category	Food secure	Food insecure		
		All	With low food security	With very low food security
Percent				
Income less than 130 percent of poverty line				
Received SNAP benefits in the previous 12 months	48.1	51.9	29.5	22.4
Received SNAP benefits for all 12 months	50.4	49.6	29.6	20.0
Received SNAP benefits for 1 to 11 months	40.5	59.5	29.1	30.4
Did not receive SNAP benefits in the previous 12 months	73.5	26.5	16.2	10.3
Income less than 185 percent of poverty line; school-age children in household				
Received NSLP free or reduced-price school lunch in the previous 30 days	56.3	43.7	28.4	15.3
Did not receive NSLP free or reduced-price school lunch in the previous 30 days	72.0	28.0	18.6	9.4
Income less than 185 percent of poverty line; children under age 5 in household				
Received WIC in the previous 30 days	63.0	37.0	23.0	14.0
Did not receive WIC in the previous 30 days	63.8	36.2	24.3	11.9

SNAP = Supplemental Nutrition Assistance Program, formerly the Food Stamp Program. NSLP = National School Lunch Program. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

Participation in Federal Food and Nutrition Assistance Programs by Food-Insecure Households

About 58 percent of food-insecure households reported receiving assistance from one or more of the three largest Federal food and nutrition assistance programs during the month before the December 2023 food security survey (table 9). About 42 percent of food-insecure households participated in SNAP. Children in 28.9 percent of food-insecure households received free or reduced-price school lunches. An estimated 7.0 percent of food-insecure households received WIC benefits. An estimated 55.8 percent of households classified as having very low food security reported participating in one or more of the three largest Federal food and nutrition assistance programs, with the largest share (43.5 percent) participating in SNAP.⁴⁴ Some food-insecure households may not be eligible for these programs, may choose not to participate, or may underreport utilization of these programs.⁴⁵

⁴⁴ The statistics in table 9 were also calculated for households that were food insecure during the 30-day period before the survey. In principle, that analysis was preferable because food security status and the use of programs were more contemporaneous than when food insecurity was assessed over a 12-month period. However, the results differed only slightly from those in table 9 and are not presented in a separate table. In 2023, an estimated 57.0 percent of households that were food insecure during the 30-day period before the survey participated in SNAP, free or reduced-price school lunch, or WIC during that same period. Among households that experienced very low food security in the 30-day period before the survey, 56.3 percent participated in SNAP, free or reduced-price school lunch, or WIC during that same time.

⁴⁵ These statistics may be biased downward. By comparing household survey data and administrative records, it was documented that food and nutrition assistance program participation is underreported by household survey respondents, including those in the Current Population Survey (Meyer & George, 2011; Parker, 2011; Meyer et al., 2009; Meyer et al., 2015; Meyer & Mittag, 2019). This is probably true for food-insecure households as well, although the extent of underreporting by these households is not known. Because the statistics may be biased, the authors did not discuss the statistical significance of changes between years. Statistics were based on the subsample of households with annual incomes below 185 percent of the poverty line. Not all these households were eligible for certain programs. For example, many households without pregnant women or children and with incomes above program cutoffs would not have been eligible for any of the programs.

Table 9

Participation of food-insecure U.S. households in selected Federal food and nutrition assistance programs,¹ 2023

Program	Share of food-insecure households that participated in the program during the previous 30 days ^{2,3}	Share of households with very low food security that participated in the program during the previous 30 days ^{2,3}
	Percent	
SNAP	42.3	43.5
NSLP Free or reduced-price school lunch	28.9	24.8
WIC	7.0	6.4
Any of the three programs	58.1	55.8
None of the three programs	41.9	44.3

SNAP = Supplemental Nutrition Assistance Program, formerly the Food Stamp Program. NSLP = National School Lunch Program. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

¹Analysis was restricted to a household's participation in one of the three largest U.S. food and nutrition assistance programs. Households not participating in these programs were included at the bottom of the table to facilitate comparisons.

²Analysis was 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 and nutrition assistance programs.

³These statistics understate the extent of food and nutrition assistance program participation because program participation was underreported by household survey respondents; see footnote 45.

Source: USDA, Economic Research Service using U.S. Department of Commerce, Bureau of the Census, 2023 Current Population Survey Food Security Supplement data.

References

- Anderson, S. A. (1990). Core indicators of nutritional state for difficult-to-sample populations. *The Journal of Nutrition*, 120, 1555–1598.
- Andrews, M., Bickel, G., & Carlson, S. (1998). Household food Security in the United States in 1995: Results from the food security measurement project. *Family Economics and Nutrition Review*, 11(1/2), 17.
- Bartfeld, J., Dunifon, R., Nord, M., & Carlson, S. (2006). *What factors account for state-to-state differences in food security?* (Report No. EIB-20). U.S. Department of Agriculture, Economic Research Service.
- Bartfeld, J., & Men, F. (2017). Food insecurity among households with children: The role of the state economic and policy context. *Social Service Review*, 91(4), 691–732.
- Bickel, G., Andrews, M., & Carlson, S. (1998). The magnitude of hunger: In a new national measure of food security. *Topics in Clinical Nutrition*, 13(4), 15–30.
- Bickel, G., Nord, M., Price, C., Hamilton, W. L., & Cook, J. T. (2000). *Guide to measuring household food security, Revised 2000*. U.S. Department of Agriculture, Food and Nutrition Service.
- Carlson, S. J., Andrews, M. S., & Bickel, G. W. (1999). Measuring food insecurity and hunger in the United States: Development of a national benchmark measure and prevalence estimates. *The Journal of Nutrition*, 129(2), 510S–516S.
- Coleman-Jensen, A. (2015). Commemorating 20 years of U.S. food security measurement. *Amber Waves*, U.S. Department of Agriculture, Economic Research Service, 13(9), 1–8.
- Coleman-Jensen, A., Gregory, C. A., & Singh, A. (2014). *Household food security in the United States in 2013* (Report No. ERR-173). U.S. Department of Agriculture, Economic Research Service.
- Coleman-Jensen, A., McFall, W., & Nord, M. (2013). *Food insecurity in households with children: Prevalence, severity, and household characteristics, 2010–11* (Report No. EIB-113). U.S. Department of Agriculture, Economic Research Service.
- Coleman-Jensen, A., & Rabbitt, M. (2023). *Analysis of the current population survey food security supplement split-panel test* (Report No. TB-1963). U.S. Department of Agriculture, Economic Research Service.
- Coleman-Jensen, A., Rabbitt, M. P., & Gregory, C. A. (2017). *Examining an “experimental” food security status classification method for households with children* (Report No. TB-1945). U.S. Department of Agriculture, Economic Research Service.
- Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2021). *Household food security in the United States in 2020* (Report No. ERR-298). U.S. Department of Agriculture, Economic Research Service.
- Czajka, J., Peterson, A., McGill, B., Thorn, B., & Warner-Griffin, C. (2012). *The extent and nature of underreporting of SNAP participation in federal surveys*. Prepared by Insight Policy Research, Inc., for U.S. Department of Agriculture, Food and Nutrition Service.
- Engelhard Jr., G., Rabbitt, M. P., & Engelhard, E. M. (2018). Using household fit indices to examine the psychometric quality of food insecurity measures. *Educational and Psychological Measurement*, 78(6), 1089–1107.
- Farnham, K. (2017). *Evaluating nonresponse bias in the 2015 Food Security Supplement to the Current Population Survey*. Memorandum for U.S. Department of Agriculture, Economic Research Service, Food Assistance Branch, from the U.S. Department of Commerce, Bureau of the Census, Demographic Statistical Methods Division.

- Fram, M. S., Frongillo, E. A., Jones, S. J., Williams, R. C., Burke, M. P., DeLoach, K. P., & Blake, C. E. (2011). Children are aware of food insecurity and take responsibility for managing food resources. *The Journal of Nutrition*, 141(6), 1114–1119.
- Gregory, C. A. (2020). Are we underestimating food insecurity? Partial identification with a Bayesian 4-parameter IRT model. *Journal of Classification*, 37, 632–655.
- Gregory, C. A., & Coleman-Jensen, A. (2017). *Food insecurity, chronic disease, and health among working-age adults* (Report No. ERR-235). U.S. Department of Agriculture, Economic Research Service.
- Gregory, C. A., Mancino, L., & Coleman-Jensen, A. (2019). *Food security and food purchase quality among low-income households: Findings from the National Household Food Acquisition and Purchase Survey (FoodAPS)* (Report No. ERR-269). U.S. Department of Agriculture, Economic Research Service.
- Gregory, C., Rabbitt, M. P., & Ribar, D. C. (2015). The supplemental nutrition assistance program and food insecurity. In J. Bartfield, Craig Gunderson, Timothy M. Smeeding, and James P. Ziliak (Eds.), *SNAP Matters: How food stamps affect health and well-being* (pp. 74–106). Stanford University Press.
- Gundersen, C., & Gruber, J. (2001). The dynamic determinants of food insecurity. In M. Andrews & M. Prell (Eds.), *Second Food Security Measurement and Research Conference, volume II: Papers* (Vol. FANRR-11-2, pp. 92–110). U.S. Department of Agriculture, Economic Research Service.
- Gundersen, C., Kreider, B., & Pepper, J. V. (2017). Partial identification methods for evaluating food assistance programs: A case study of the causal impact of SNAP on food insecurity. *American Journal of Agricultural Economics*, 99(4), 875–893.
- Gundersen, C., & Oliveira, V. (2001). The food stamp program and food insufficiency. *American Journal of Agricultural Economics*, 83(4), 875–887.
- Hamilton, W. T., Cook, J. T., Thompson, W. W., Buron, L. F., Frongillo, J., Edward A., Olson, C. M., & Wehler, C. A. (1997a). *Household food security in the United States in 1995: Summary report of the food security measurement project*. Prepared for U.S. Department of Agriculture, Food and Nutrition Service.
- Hamilton, W. T., Cook, J. T., Thompson, W. W., Buron, L. F., Frongillo, J., Edward A., Olson, C. M., & Wehler, C. A. (1997b). *Household food security in the United States in 1995: Technical Report*. Prepared for U.S. Department of Agriculture, Food and Nutrition Service.
- Hanson, K. L., & Connor, L. M. (2014). Food insecurity and dietary quality in U.S. adults and children: A systematic review. *The American Journal of Clinical Nutrition*, 100(2), 684–692.
- Hoop, R., Hatch, J., Hood, E., Farber, J., & Hornick, D. (2022a). *Evaluating nonresponse bias in the 2020 Food Security Supplement to the Current Population Survey*. Memorandum for U.S. Department of Agriculture, Economic Research Service, Food Assistance Branch, from U.S. Department of Commerce, Bureau of the Census, Demographic Statistical Methods Division, Sample Design and Estimation.
- Hoop, R., Farber, J., Hornick, D., & Hood, E. (2022b). *Evaluating nonresponse bias in the 2021 Food Security Supplement to the Current Population Survey*. Memorandum for U.S. Department of Agriculture, Economic Research Service, Food Assistance Branch, from U.S. Department of Commerce, Bureau of the Census, Demographic Statistical Methods Division, Sample Design and Estimation.
- Hoop, R., & Zhang, W. (2023). *Evaluating nonresponse bias in the 2022 Food Security Supplement to the Current Population Survey*. Memorandum for U.S. Department of Agriculture, Economic Research Service, Food Assistance Branch, from the U.S. Department of Commerce, Bureau of the Census, Demographic Statistical Methods Division, Sample Design and Estimation.

- Jones, J. W., Toossi, S., & Hodges, L. (2022). *The food and nutrition assistance landscape: Fiscal year 2021 annual report* (Report No. EIB-237). U.S. Department of Agriculture, Economic Research Service.
- Jones, J. W., & Toossi, S. (2024). *The food and nutrition assistance landscape: Fiscal year 2023 annual report* (Report No. EIB-274). U.S. Department of Agriculture, Economic Research Service.
- Leung, C. W., Epel, E. S., Ritchie, L. D., Crawford, P. B., & Laraia, B. A. (2014). Food insecurity is inversely associated with diet quality of lower-income adults. *Journal of the Academy of Nutrition and Dietetics*, 114(12), 1943–1953.
- Leung, C. W., & Tester, J. M. (2019). The association between food insecurity and diet quality varies by race/ethnicity: An analysis of National Health and Nutrition Examination Survey 2011–2014 results. *Journal of the Academy of Nutrition and Dietetics*, 119(10), 1676–1686.
- Mabli, J., Ohls, J., Dragoset, L., Canstner, L., & Santos, B. (2013). *Measuring the effect of supplemental nutrition assistance program (SNAP) participation on food security*. Prepared for U.S. Department of Agriculture, Food and Nutrition Service.
- MacLachlan, M., & C. Lowe. (2021). *Food price environment: Interactive visualization*. U.S. Department of Agriculture, Economic Research Service.
- Meyer, B. D., & Goerge, R. M. (2011). *Errors in survey reporting and imputation and their effects on estimates of food stamp program participation*. Working Paper, University of Chicago.
- Meyer, B. D., & Mittag, N. (2019). Misreporting of government transfers: How important are survey design and geography? *Southern Economic Journal*, 86(1), 230–253.
- Meyer, B. D., Mok, W. K., & Sullivan, J. X. (2009). *The under-reporting of transfers in household surveys: Its nature and consequences* (Working Paper No. 15181). National Bureau of Economic Research.
- Meyer, B. D., Mok, W. K., & Sullivan, J. X. (2015). Household surveys in crisis. *Journal of Economic Perspectives*, 29(4), 199–226.
- National Research Council (2006). Food insecurity and hunger in the United States: An assessment of the measure. In G. S. Wunderlich & J. L. Norwood (Eds.), *Committee on National Statistics, Panel to Review the U.S. Department of Agriculture's Measurement of Food Insecurity and Hunger* (Vol. 10, pp. 11578). The National Academies Press.
- Nelson, K., Brown, M. E., & Lurie, N. (1998). Hunger in an adult patient population. *Jama*, 279(15), 1211–1214.
- Nord, M. (2009a). *Food insecurity in households with children: Prevalence, severity, and household characteristics* (Report No. EIB-56). U.S. Department of Agriculture, Economic Research Service.
- Nord, M. (2009b). *Food spending declined and food insecurity increased for middle-income and low-income households from 2000 to 2007* (Report No. EIB-61). U.S. Department of Agriculture, Economic Research Service.
- Nord, M. (2012). How much does the supplemental nutrition assistance program alleviate food insecurity? Evidence from recent programme leavers. *Public Health Nutrition*, 15(5), 811–817.
- Nord, M. (2013). *Effects of the decline in the real value of SNAP benefits from 2009 to 2011* (Report No. ERR-151). U.S. Department of Agriculture, Economic Research Service.
- Nord, M., Andrews, M., & Winicki, J. (2000). *Frequency and duration of food insecurity and hunger in U.S. households* (Conference session). Fourth International Conference on Dietary Assessment Methods, Tucson, Arizona, United States.

- Nord, M., & Bickel, G. (2002). *Measuring children's food security in U.S. households, 1995–99* (Report No. FANRR-25). U.S. Department of Agriculture, Economic Research Service.
- Nord, M., & Coleman-Jensen, A. (2014). Improving food security classification of households with children. *Journal of Hunger & Environmental Nutrition*, 9(3), 318–333.
- Nord, M., & Golla, A. M. (2009). *Does SNAP decrease food insecurity? Untangling the self-selection effect* (Report No. ERR-85). U.S. Department of Agriculture, Economic Research Service.
- Nord, M., & Hanson, K. (2012). Adult caregiver reports of adolescents' food security do not agree well with adolescents' own reports. *Journal of Hunger & Environmental Nutrition*, 7(4), 363–380.
- Nord, M., & Hopwood, H. (2007). Recent advances provide improved tools for measuring children's food security. *The Journal of Nutrition*, 137(3), 533–536.
- Nord, M., Jemison, K., & Bickel, G. (1999). *Prevalence of food insecurity and hunger, by state, 1996–1998* (Report No. FANRR-2). U.S. Department of Agriculture, Economic Research Service.
- Nord, M., & Kantor, L. S. (2006). Seasonal variation in food insecurity is associated with heating and cooling costs among low-income elderly Americans. *The Journal of Nutrition*, 136(11), 2939–2944.
- Nord, M., & Prell, M. (2011). *Food security improved following the 2009 ARRA increase in SNAP benefits* (Report No. ERR-116). U.S. Department of Agriculture, Economic Research Service.
- Ohls, J. C., L. Radbill, L. M., & Schirm, A. L. (2001). *Household food security in the United States, 1995–1997: Technical issues and statistical report*. Prepared for the U.S. Department of Agriculture, Food and Nutrition Service.
- Oliveira, V. J., & Rose, D. (1996). *Food expenditure estimates from the 1995 CPS Food Security Supplement: How do they compare with the consumer expenditure survey?* (Staff Report No. AGES9617). U.S. Department of Agriculture, Economic Research Service.
- Parker, J. (2011). *SNAP misreporting on the CPS: Does it affect poverty estimates?* (Social, Economic, and Housing Statistics Division Working Paper No. 2012-1). U.S. Department of Commerce, Bureau of the Census.
- Rabbitt, M. P., & Coleman-Jensen, A. (2017). Rasch analyses of the standardized Spanish translation of the U.S. household food security survey module. *Journal of Economic and Social Measurement*, 42(2), 171–187.
- Rabbitt, M. P. (2014). *Measuring the effect of supplemental nutrition assistance program participation on food insecurity using a behavioral Rasch selection model* (No. 13-20). University of North Carolina at Greensboro, Department of Economics Working Paper Series.
- Rabbitt, M. P. (2018). Causal inference with latent variables from the Rasch model as outcomes. *Measurement*, 120, 193-205.
- Rabbitt, M. P., Hales, L., J., Burke, M. P., & Coleman-Jensen, A. (2023). *Household food security in the United States in 2022* (Report No. ERR-325). U.S. Department of Agriculture, Economic Research Service.
- Rabbitt, M. P., & Beymer, M. R. (2024). *Comparing food insecurity among the U.S. military and civilian adult populations* (Report No. ERR-331). U.S. Department of Agriculture, Economic Research Service.
- Rabbitt, M. P., Reed-Jones, M., Hales, L. J., & Burke, M. P. (2024). *Statistical supplement to household food security in the United States in 2023* (Report No. AP-124). U.S. Department of Agriculture, Economic Research Service.

- Rabbitt, M. P., Engelhard, G., & Jennings, J. K. (2021). Assessing the dimensionality of food-security measures. *Journal of Economic and Social Measurement*, 45(3–4), 183–213.
- Ratcliffe, C., McKernan, S.-M., & Zhang, S. (2011). How much does the supplemental nutrition assistance program reduce food insecurity? *American Journal of Agricultural Economics*, 93(4), 1082–1098.
- Ryu, J.-H., & Bartfeld, J. S. (2012). Household food insecurity during childhood and subsequent health status: The early childhood longitudinal study—Kindergarten cohort. *American Journal of Public Health*, 102(11), e50–e55.
- Scherpf, E., Newman, C., & Prell, M. (2015). *Improving the assessment of SNAP targeting using administrative records* (Report No. ERR-186). U.S. Department of Agriculture, Economic Research Service.
- Tiehen, L., Newman, C., & Kirlin, J. A. (2017). *The food spending patterns of SNAP households: Findings from the national food acquisition and purchase survey data* (Report No. EIB-176). U.S. Department of Agriculture, Economic Research Service.
- U.S. Department of Agriculture. (2021). *Thrifty food plan, 2021* (Report No. FNS-916). U.S. Department of Agriculture.
- U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. (2024). *Official USDA thrifty food plan: U.S. average, December 2023*. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.
- U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support. (2022). *Characteristics of supplemental nutrition assistance program households: Fiscal year 2020* (SNAP-21-CHAR). U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support.
- U.S. Department of Labor, Bureau of Labor Statistics (2024). *The employment situation—December 2023* (USD-24-0006). (Press release).
- Wilde, P., & Nord, M. (2005). The effect of food stamps on food security: A panel data approach. *Review of Agricultural Economics*, 27(3), 425–432.
- Wilde, P. E., Nord, M., & Zager, R. E. (2010). In longitudinal data from the survey of program dynamics, 16.9% of the U.S. population was exposed to household food insecurity in a 5-year period. *Journal of Hunger & Environmental Nutrition*, 5(3), 380–398.
- Yen, S. T., Andrews, M., Chen, Z., & Eastwood, D. B. (2008). Food stamp program participation and food insecurity: An instrumental variables approach. *American Journal of Agricultural Economics*, 90(1), 117–132.
- Zizza, C. A., Duffy, P. A., & Gerrior, S. A. (2008). Food insecurity is not associated with lower energy intakes. *Obesity*, 16(8), 1908–1913.