In 2013, more than one in five U.S. children (21 percent) lived in households that were food-insecure at some point during the year, and 1.0 percent experienced the most severe level of need, where food intake is reduced and regular eating patterns are disrupted.\[1\]

**Importance**

Inadequate food intake in children is associated with a number of serious health, behavior, and cognitive deficits. Children who are food-insecure are in poorer health and are more likely to be developmentally \textit{at-risk} than non-food-insecure children, according to parental reports.\[2,3\] Infants who experience food insecurity are more likely to have insecure attachment relationships, and to perform more poorly on tests of cognitive development.\[4\] Children in food-insecure households have more stomach aches, frequent headaches, and colds than children who are in food-secure households. Higher rates of hospitalization, iron deficiency anemia, and chronic health conditions are reported among food-insecure children.\[5\]

Studies also report that food insecurity is associated with higher rates of behavioral problems in three-year-olds; in school-aged children, psychosocial deficits, as well as higher anxiety and depression; and, in adolescents, higher rates of depressive disorder and suicidal symptoms. Food-insecure children show smaller gains in math and reading achievement between kindergarten and third grade, and, among those ages six to 11, a higher likelihood of repeating a grade.\[6\] Food insecurity, particularly when experienced in the earliest primary grades, also has a significant detrimental effect on non-cognitive classroom measures, such as interpersonal skills, self-control, and the group of competencies (including attentiveness, persistence, and flexibility) termed \textit{approaches to learning.}\[7\]

Counter-intuitively, child food-insecurity is also associated with a greater risk for being overweight.\[8,9,10\] While the processes underlying this association are not completely understood, food insecurity can result in lower diet quality and less variety, both of which can contribute to being overweight, and unpredictable availability of food can lead to overeating.\[11\] In a study led by Child Trends researchers, household food insecurity was also associated with mothers’ depressive symptoms, and with fewer positive interactions between parents and their infant children; each of those factors could play some role in accounting for risk for being overweight.\[12\] Food insecurity can also affect the health of pregnant women. One study showed that women living in food-insecure households had greater pregnancy weight-gains and a higher risk of diabetes—both of which increase the risk their infants will have health conditions related to overweight status.\[13\]

Recent research shows that even \textit{marginal} food security is associated with poor health and developmental outcomes.\[14\]

A 2011 report calculated the annual cost burden of hunger in the United States (adults
and children) at a minimum of $167.5 billion. This estimate includes the hunger-related costs associated with charity, illness and psychosocial dysfunction, and diminished learning and economic productivity. [15]

Food security is typically reported at the household level. As of 2013, 14 percent of households with children had low food security, and an additional six percent had very low food security. [16] Parents are often able to keep their children â€œfood-secure,â€ even when parents themselves have low food security. However, food insecurity can be aggravated by the trade-offs households make to stretch limited economic resources. For example, a study found that as householdsâ€™ â€œenergy insecurityâ€ (difficulty paying for heating/cooling and utilities) increased, so did the likelihood of childrenâ€™s food insecurity. [17] Another study found that children living with adult smokers had twice the risk of food insecurity as those living in households without smokers [18]

In a 2007 survey, households with low food security among children were more likely to report they reduced the quality and variety of childrenâ€™s meals, rather than reducing the amount of food they gave children. Households with very low food security among children reported multiple indicators of going without food, or reducing the amount of food, due to lack of money to buy food [19]

**Trends**

In 2013, 21 percent of children under 18 lived in food-insecure households, and one percent in households with very low food security among children specifically. (Figure 1)

Household food insecurity among children rose between 1999 and 2004, reflecting a slowing economy in those years. In 2005, the rate of household food insecurity among children declined, then remained fairly constant (at 17 percent) until 2008, when it rose to 23 percent. Since then, it has decreased a small amount, and in 2013, the proportion of children in food-insecure households was at 21 percent. The prevalence of very low food security among children remained essentially the same from 1999 to 2006, at around 0.7 percent, but increased in 2007 to 0.9 percent, and to 1.5 percent in 2008, before declining slightly between 2008 and 2013, to 1.0 percent. (Figure 1)

**Differences by Race and Hispanic Origin** [20]
In 2013, household food insecurity was more than twice as prevalent among children in households headed by blacks (36 percent) or Hispanics (30 percent), than in those headed by whites (15 percent). The proportion of households where children had very low food security was between three and four times as high in black or Hispanic households as it was in white households. (Figure 2)

Differences by Family Structure

In 2013, household food insecurity among children was more than twice as prevalent in households headed by single women (37 and 15 percent, respectively), and also significantly higher than was found among households headed by single men (26 percent). Children in households headed by a single woman were also twice as likely as children in households headed by a married couple to experience very low food security themselves, at 2.0 and 0.7 percent, respectively. (Figure 3)

Differences by Household Income
Throughout the period of 1999-2013, the percentage of children living in households with incomes below the federal poverty level that were also food-insecure was more than twice as high as it was among all households, although in 2010 that difference was the smallest ever recorded. (Appendix 1) In 2013, the prevalence of very low food security among children was nearly more than twice as high among poor households as it was among all households. (Appendix 2)

Forty-six percent of all children in households with annual incomes below the federal poverty line were living with household food insecurity in 2012, compared with 32 percent in households with incomes between 100 and 199 percent of poverty, and eight percent in households with incomes above 200 percent of the federal poverty level. (Figure 4) Differences by income-group in the proportion of children in food-insecure households narrowed between 2001 and 2010, with the greatest decreases between 2007 and 2008, but have increased since then. (Appendix 1) In 2007, most households (85 percent) with food-insecure children had at least one adult in the workforce, including 70 percent that had a full-time adult worker. [21]

State and Local Estimates

State-level data for 2011-2013 on food insecurity among households (regardless of the presence of children) are available from the U.S. Department of Agriculture. (Table 4)

A 2009-10 survey conducted by the Food Research and Action Center (FRAC), using questions similar, but not identical to those used by the U.S. Department of Agriculture surveys, produced estimates of “food hardship” for the nation, states, Metropolitan Statistical Areas, and congressional districts.

Feeding America has developed synthetic estimates of child food insecurity at county and Congressional District levels, as well as county-level estimates of food price variation.

International Estimates

Food security statistics for the world population can be found on the Food and Agriculture Organization (FAO) of the United Nations web site.

FAO also reports on food insecurity in the developing world, by region, sub-region, and country; the 2010 report is currently available.
National Goals

Through the Healthy People 2020 initiative, the federal government aims to eliminate very low food security among children, bringing it from 1.3 percent in 2008 to 0.2 percent in 2020. This goal is based on a similar goal set by the Obama administration, to eliminate very low food insecurity among children by 2015.[22] Additionally, the Healthy People 2020 initiative has set a goal to reduce the percentage of all households that are food insecure, from 14.6 percent in 2008 to 6 percent in 2020.

More information is available here. (Goals NWS-12 and 13)

What Works to Make Progress on This Indicator

Studies have shown that a number of publicly funded "safety net" programs--food stamps, TANF (welfare), WIC, LIHEAP (low-income heating assistance), and subsidized housing--alleviate hunger and food insecurity and some of their deleterious effects on children. See publications from the Childrenâ€™s Sentinel Nutrition Assessment Program and the U. S. Department of Agriculture.

In addition, there is evidence to suggest that young, low-income children who attend child care programs that participate in the federal Child and Adult Care Food Program, and who eat meals supplied by the child care provider, have better health outcomes than children of the same status whose meals in child care were supplied from home. More information is available here.

Rural low-income households with children may be more likely to be food-secure when mothers have skills related to budgeting for, purchasing, and preparing food, and have knowledge of community resources. See the this publication for more information. (pp. 12-20).

Related Indicators

- Children in Poverty
- Food Stamp Receipt
- Overweight Children and Youth

Definition

The United States Department of Agriculture defines food insecurity as the limited or uncertain availability of nutritionally adequate and safe foods, or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.[23] Households are classified as food insecure if they reported three or more indications of food insecurity in responses to 18 questions referring to experience within the past 12 months. The food security of children in the household is assessed by responses to eight of the questions (the latter group asked only if the household included children younger than 18).

Data Sources

Agriculture. Economic Research Service. Table S-3. Available at:

http://www.childstats.gov/americaschildren/tables.asp


Raw Data Source

U.S. Department of Agriculture, Economic Research Service,


http://www.census.gov/cps/about/supplemental.html

Appendix 1 - Percentage of Children Ages 0-17 in Food-Insecure
Households:¹ Selected Years, 1995- 2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Children</td>
<td>19.4</td>
<td>19.7</td>
<td>16.9</td>
<td>18.0</td>
<td>17.6</td>
<td>18.1</td>
<td>18.2</td>
<td>19.0</td>
<td>16.9</td>
<td>17.2</td>
<td>16.9</td>
<td>22.5</td>
<td>23.2</td>
<td>21.6</td>
<td>22.4</td>
<td>21.6</td>
<td>21.4</td>
</tr>
<tr>
<td>Race/Hispanic Origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>14.0</td>
<td>11.0</td>
<td>11.9</td>
<td>12.6</td>
<td>12.0</td>
<td>13.0</td>
<td>12.2</td>
<td>11.8</td>
<td>11.9</td>
<td>16.0</td>
<td>16.7</td>
<td>14.9</td>
<td>16.0</td>
<td>16.9</td>
<td>15.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>30.6</td>
<td>28.6</td>
<td>29.6</td>
<td>29.4</td>
<td>30.8</td>
<td>31.2</td>
<td>29.2</td>
<td>29.3</td>
<td>26.1</td>
<td>34.0</td>
<td>34.6</td>
<td>34.8</td>
<td>32.0</td>
<td>31.5</td>
<td>36.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>33.9</td>
<td>29.2</td>
<td>28.6</td>
<td>29.2</td>
<td>30.8</td>
<td>29.6</td>
<td>23.7</td>
<td>26.0</td>
<td>26.7</td>
<td>33.9</td>
<td>34.9</td>
<td>32.5</td>
<td>34.5</td>
<td>28.7</td>
<td>29.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty level³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 100% FPL</td>
<td>44.4</td>
<td>44.0</td>
<td>45.9</td>
<td>45.6</td>
<td>45.2</td>
<td>47.1</td>
<td>42.5</td>
<td>43.6</td>
<td>42.9</td>
<td>51.5</td>
<td>51.2</td>
<td>43.7</td>
<td>46.0</td>
<td>45.8</td>
<td>46.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 100% and 199% FPL</td>
<td>25.4</td>
<td>23.4</td>
<td>27.1</td>
<td>28.4</td>
<td>29.6</td>
<td>28.0</td>
<td>26.4</td>
<td>26.7</td>
<td>27.5</td>
<td>33.7</td>
<td>34.5</td>
<td>32.3</td>
<td>31.7</td>
<td>32.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200% FPL and more</td>
<td>4.8</td>
<td>5.2</td>
<td>5.5</td>
<td>6.0</td>
<td>6.2</td>
<td>6.2</td>
<td>6.0</td>
<td>6.1</td>
<td>6.1</td>
<td>8.9</td>
<td>9.1</td>
<td>8.6</td>
<td>7.0</td>
<td>7.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married-couple household</td>
<td>13.3</td>
<td>11.5</td>
<td>12.6</td>
<td>12.0</td>
<td>12.3</td>
<td>13.0</td>
<td>11.3</td>
<td>11.5</td>
<td>11.8</td>
<td>15.8</td>
<td>17.1</td>
<td>15.4</td>
<td>15.6</td>
<td>14.5</td>
<td>14.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female-headed household, no spouse</td>
<td>38.6</td>
<td>33.4</td>
<td>33.5</td>
<td>35.5</td>
<td>34.5</td>
<td>35.8</td>
<td>32.8</td>
<td>33.3</td>
<td>31.8</td>
<td>39.9</td>
<td>38.4</td>
<td>36.9</td>
<td>39.6</td>
<td>38.0</td>
<td>37.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male-headed household, no spouse</td>
<td>21.0</td>
<td>18.8</td>
<td>17.1</td>
<td>23.0</td>
<td>24.3</td>
<td>24.0</td>
<td>18.4</td>
<td>19.5</td>
<td>20.5</td>
<td>30.0</td>
<td>28.6</td>
<td>27.6</td>
<td>26.3</td>
<td>26.0</td>
<td>25.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Education⁴</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high</td>
<td>11.0</td>
<td>9.5</td>
<td>8.2</td>
<td>4.1</td>
<td>4.4</td>
<td>3.7</td>
<td>2.8</td>
<td>3.0</td>
<td>3.0</td>
<td>3.3</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Data includes any child who was food-insecure at any time during the year.
² For 1995 and 1999, values are based on the National Food Security Survey.
³ Less than 100% FPL includes those who had income of less than 100% of the Federal Poverty Level (FPL).
⁴ Less than high includes any child who had less than a high school degree.

© Copyright 2014 Child Trends - All Rights Reserved
Either adults or children or both were food insecure. At times they were unable to acquire adequate food for active, healthy living for all household members because they had insufficient money and other resources for food. Statistics for 1995 are not precisely comparable with those for more recent years, due to a change in the method of screening Current Population Survey (CPS) sample households into the food security questions. The effect on 1995 statistics (a slight downward bias) is perceptible only for the category “In food-insecure households.” Statistics for 1996, 1997 are omitted because they are not directly comparable with those for the other years.


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Children</td>
<td>1.3</td>
<td>1.0</td>
<td>0.7</td>
<td>0.8</td>
<td>0.6</td>
<td>0.8</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.6</td>
<td>0.9</td>
<td>1.5</td>
<td>1.3</td>
<td>1.3</td>
<td>1.1</td>
<td>1.3</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Race/Hispanic Origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>0.8</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
<td>0.5</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
<td>0.7</td>
<td>0.5</td>
<td>0.6</td>
<td>0.8</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>2.3</td>
<td>1.0</td>
<td>1.4</td>
<td>1.3</td>
<td>1.0</td>
<td>1.3</td>
<td>1.9</td>
<td>1.5</td>
<td>1.8</td>
<td>3.2</td>
<td>2.3</td>
<td>2.6</td>
<td>2.2</td>
<td>2.5</td>
<td>2.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.6</td>
<td>1.3</td>
<td>1.3</td>
<td>1.6</td>
<td>1.6</td>
<td>1.2</td>
<td>1.2</td>
<td>0.7</td>
<td>1.9</td>
<td>2.7</td>
<td>2.5</td>
<td>2.5</td>
<td>2.0</td>
<td>1.9</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 100% FPL</td>
<td>3.4</td>
<td>2.2</td>
<td>2.6</td>
<td>2.4</td>
<td>2.0</td>
<td>2.5</td>
<td>2.9</td>
<td>2.1</td>
<td>3.0</td>
<td>4.3</td>
<td>4.2</td>
<td>3.3</td>
<td>3.0</td>
<td>3.4</td>
<td>2.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 100% and 199% FPL</td>
<td>1.4</td>
<td>0.9</td>
<td>0.8</td>
<td>1.2</td>
<td>0.9</td>
<td>1.1</td>
<td>0.8</td>
<td>0.8</td>
<td>1.2</td>
<td>2.1</td>
<td>1.8</td>
<td>1.3</td>
<td>1.4</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200% FPL and more</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
<td>0.5</td>
<td>0.2</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married-couple household</td>
<td>0.8</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
<td>0.2</td>
<td>0.5</td>
<td>0.5</td>
<td>0.2</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
<td>0.8</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female-headed household, no spouse</td>
<td>2.8</td>
<td>1.6</td>
<td>1.7</td>
<td>1.8</td>
<td>1.8</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
<td>2.0</td>
<td>3.2</td>
<td>2.7</td>
<td>2.3</td>
<td>1.9</td>
<td>2.5</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Male-headed household, no spouse

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school or GED</td>
<td>1.1</td>
<td>1.0</td>
<td>0.7</td>
<td>0.9</td>
<td>1.1</td>
<td>0.7</td>
<td>1.0</td>
<td>0.8</td>
<td>0.7</td>
<td>0.5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>High school /GED</td>
<td>1.2</td>
<td>1.4</td>
<td>1.1</td>
<td>1.2</td>
<td>2.1</td>
<td>2.4</td>
<td>2.4</td>
<td>2.8</td>
<td>3.2</td>
<td>2.4</td>
<td>2.8</td>
<td>3.2</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Some college, including vocational/technical or associate’s degree</td>
<td>1.5</td>
<td>0.8</td>
<td>0.5</td>
<td>0.7</td>
<td>0.9</td>
<td>1.1</td>
<td>0.5</td>
<td>1.0</td>
<td>1.6</td>
<td>1.6</td>
<td>1.4</td>
<td>1.6</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>


Endnotes

[1]“Food-insecure” is a term used by the U.S. Department of Agriculture to refer to “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.” “Very low food security,” the most severe level measured by the survey, is characterized by irregular meals and inadequate food intake, as determined by caregivers.


[6] Ibid.


[12] Ibid.


Hispanics may be any race. Estimates for whites and blacks in this report do not include Hispanics.


Suggested Citation:


Last updated: December 2014