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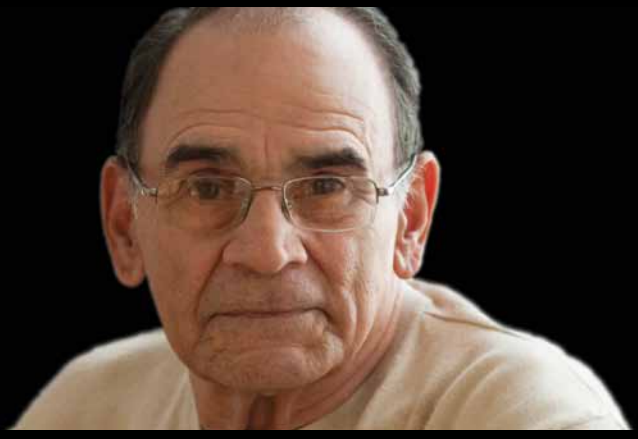


FOOD INSECURITY AMONG OLDER ADULTS

FULL REPORT | August 2011

DRIVE TO END HUNGER AARP

Food Insecurity Among Older Adults

A report submitted to AARP Foundation

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Executive Summary

Reducing hunger risk among older Americans requires a concerted policy effort that is informed by rigorous research on the extent, causes, and consequences of food insecurity. In this report we provide a comprehensive portrait of the causes and consequences of food insecurity among adults age 50-59 in comparison to those in their 40s and those 60 and older. We emphasize the 50-59 age cohort in part because they do not have access to an age-specific safety net like older Americans (or some younger ones), take-up rates in food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) are low, and the scaring effects of job loss can be more severe. We complement our age-specific analyses by examining the full samples of adults age 40 and older, those adults age 50 and older, and the subsamples with family incomes below 200% and below 300% of the poverty line.

To address these issues we use survey data from the 2001-2009 waves of the Current Population Survey (CPS), and the 1999-2008 waves of the National Health and Nutrition Examination Survey (NHANES). These data sets are especially well-suited to this project since they are the only nationally representative data with the full set of 18 questions on the Core Food Security Module (CFSM), the module used to establish the food insecurity status of households in the United States, over multiple years. We consider three characterizations of food insecurity: marginally food insecure; food insecure, and very low food secure. To be considered marginally food insecure means the person answers affirmatively to at least one question on the CFSM, to be food insecure means the respondent answers affirmatively to at least 3 questions, and to be very low food secure means that the respondent answers affirmatively to at least 8 questions in households with children and at least 5 questions in households without children. We employ a variety of statistical methods to address the links between food insecurity and health outcomes.

Our key findings on the trends and distribution of food insecurity are:

- Across all categories and older adult age groups, food insecurity increased substantially after 2007. The increases were most pronounced among 40-49 year olds, followed by 50-59 year olds, and then those 60 and older. Food insecurity for 40-49 year olds increased an astounding 68 percent between 2007-2009 compared to 38 percent for 50-59 year olds, and 25 percent among those over 60. Rates of very low food security rates among adults in their 50s had comparable increases to those in their 40s (69 percent versus 71 percent).
- The increasing trend in food insecurity implies that by 2009, among adults age 50 and older, 15.6 million persons faced the threat of hunger (i.e. were marginally food insecure), 8.8 million faced the risk of hunger (i.e. were food insecure), and 3.5 million faced hunger (i.e. were low food secure). This is an increase of 66%, 79%, and 132%, respectively, from the levels of food insecurity in 2001 among this population.
- The levels of food insecurity among the poor and near poor are two to three times higher in any given year than for the general population of those over age 50. However, there is not nearly as dramatic an increase in food insecurity after 2007 among the poor and near-poor in comparison to those higher in the income distribution. Thus, the recessionary increase in adult food insecurity was most pronounced among those with higher incomes.

- Both 40-49 and 50-59 year olds experiencing food insecurity tend to be found higher in the income distribution compared to the over 60 age group, i.e. the former groups tend to be more evenly spread across the distribution compared to food insecure seniors who tend to be poor or near poor.
- The share of food insecure adults age 50-59 reporting a disability is 10 percentage points higher than those food insecure adults who are younger or older. Among the poor and near poor, rates of disability stand out prominently as one in two 50-59 year olds experiencing either food insecurity or very low food security are disabled. This strikingly high rate of disability points to a particular vulnerability for the onset of food insecurity among those persons nearing retirement.
- While there is a distinct age gap in rates of food insecurity, it is about half the size of the gap across race and ethnicity. That is, in a typical year, food insecurity among 40-49 year olds is about 5 percentage points higher than persons over 60, but the rate of an African American 40-49 year old is about 10 percentage points higher than a white 40-49 year old.
- Seven of the ten states with the highest rates of food insecurity are in the South among 40-49 year olds, six are in the South among 50-59 year olds, and eight are in the South among those persons age 60 and older. Of these states three overlap the age groups—Mississippi, South Carolina, and Texas.
- Controlling for confounding factors, a 40-44 year old has a risk of marginal food insecurity that is 28 percent higher than a 60-64 year old, while a senior over age 80 has a risk of marginal food insecurity that is 41 percent lower than for a 60-64 year old.
- The multivariate regression models indicate that the age gradient of food insecurity gets steeper as the severity of insecurity increases such that the age gradient is strongest for the category of very low food security. That is, older age is more protective of food insecurity as the severity of food hardship increases.

Our key findings on the health consequences of food insecurity are:

- Comparing food secure to food insecure adults ages 50-59, intakes of most major nutrients are statistically lower among the food insecure, but the differences are not especially large in magnitude.
- In contrast to nutrient intakes, the differences between food insecure and food secure persons with respect to broader measures of health outcomes are quite stark. Food insecure 50-59 year old adults are almost twice as likely to be diabetic (19% versus 2%), are far less likely to be in excellent or very good health (17% versus 44%), are over five times more likely to suffer from depression (16% versus 3%), and over twice as likely to have at least one ADL limitation (52% versus 21). This basic pattern holds for those ages 40-49 and those over age 60.
- Once we control for confounding factors such as income, race, and education, food insecurity has no statistically significant impact on nutrient intakes, but has a sizable effect on broader health outcomes. A food insecure 50-59 year old has an ADL rating that is similar to a food secure adult 14 years older.

I. Introduction

Millions of Americans are food insecure. In 2008, the year with the highest proportion of food insecure households since food insecurity statistics were calculated, almost 50 million Americans were food insecure (Nord et al., 2009). The magnitude of this nutrition and public health challenge has raised great concern among policy makers and program administrators. In response, extensive research has emerged examining the causes and consequences of food insecurity among children. (Work since 2004 on the consequences of food insecurity includes, e.g., Chilton et al., 2009; Cook et al., 2004; Cook et al., 2006; Eicher-Miller et al., 2009; Gundersen and Kreider, 2009; Hernandez and Jacknowitz, 2009; Jyoti et al., 2005; Kirkpatrick et al., 2010; Rose-Jacobs et al., 2008; Skalicky et al., 2006; Slack and Yoo, 2005; Whitaker et al., 2006; Yoo et al., 2009; and Zaslow et al., 2009. Recent work on the causes of food insecurity includes, e.g., Cutler-Triggs, 2008; Furness et al., 2004; Garasky and Stewart, 2007; Gundersen, 2008; Heflin et al., 2007; Huang et al., 2009; Kenney 2008; and Martin et al., 2004.) Research on the causes and consequences of food insecurity at the other end of the age spectrum has been more limited. A recent set of reports for Meals On Wheels Association of America (Ziliak et al., 2008; Ziliak and Gundersen, 2009) has provided a comprehensive perspective on food insecurity among seniors.

While there has been extensive food insecurity research among children and a more limited set of research on seniors, there has been much less research on adults, especially for adults in the general population. What has been particularly absent from the food insecurity literature are studies of persons between the ages of 50 and 59. In fact, there have been no studies on this population. This research lacuna exists despite the important public health and policy issues surrounding this population group. First, unlike older Americans (especially those over the age of 62) they do not have access to an age-specific social safety net. They are generally too young for Social Security but often too old for programs designed for households with children (e.g., Temporary Assistance for Needy Families). Second, for one of the few assistance programs available to them, the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program), participation rates, controlling for other relevant factors, are substantially lower than both older and younger Americans (Gundersen and Ziliak, 2008). In light of the proven potential of SNAP to alleviate food insecurity (see, e.g., DePolt et al., 2009; Gundersen and Kreider, 2008; Gundersen and Oliveira, 2001; Gundersen et al., 2009; Nord and Golla, 2009; and Van Hook and Balistreri, 2006), these lower SNAP participation rates can lead to higher rates of food insecurity. Third, the consequences of job loss for those in their 50s can be especially severe insofar as jobs are often-times more difficult to find in this age group and, when found, are often of lower pay than previously. In research done for the full population, the negative effects of job loss and income shocks on food insecurity has been well-established (e.g., Gundersen and Gruber, 2001; Ribar and Hamrick, 2003) but the effects on those in their 50s have not been examined in particular.

In this report we use data from the Current Population Survey (CPS) to address (1) how rates of food insecurity differ between adults in their 50s and those in their 40s and those 60 and older; (2) whether rates of food insecurity differ by age of adults across various demographic groups (e.g., race/ethnicity, income levels, state of residence); and (3) how factors such as race, income, family structure, and home ownership influence the probability of food insecurity and

how these factors differ for those in their 50s to those who are younger or older. We complement the age-specific breakdowns with a comprehensive portrait of all adults age 50 and older, and those living below 200% and 300% of the poverty line. We then follow this with an analysis of data from the National Health and Examination Survey (NHANES) to test whether health outcomes of food insecure persons between the ages of 50 and 59 differ from either food secure persons in the same age group; how the differences in health outcomes by food insecurity contrast with other age groups; and, once we control for other confounding factors such as race, income, and education, how the impact of being food insecure differs for those who are food secure.

II. Trends in Food Insecurity among Older Adults

We document the trends in food insecurity among older adults using data from the December Supplement of the CPS, spanning the 2001 through 2009 calendar years. The CPS is a nationally representative survey conducted by the Census Bureau for the Bureau of Labor Statistics, providing employment, income and poverty statistics. Households are selected to be representative of civilian households at the state and national levels. The CPS does not include information on individuals living in group quarters including nursing homes or assisted living facilities. In general, a household is observed in two successive years in the CPS. Since multiple years are being used in this paper, to ensure that no household is included more than once, the sample includes households observed for the second time in 2001 through 2009. Excluding households with heads younger than 40, the pooled sample includes 236,997 adults above the age of 40. Because previous research suggests that the risk of food insecurity is greater for the near poor, we also conduct a full set of analyses for the 52,580 individuals with incomes below 200% of the poverty line and for the 88,550 individuals with incomes below 300% of the poverty line. (Those with missing incomes are excluded from the low-income analyses).

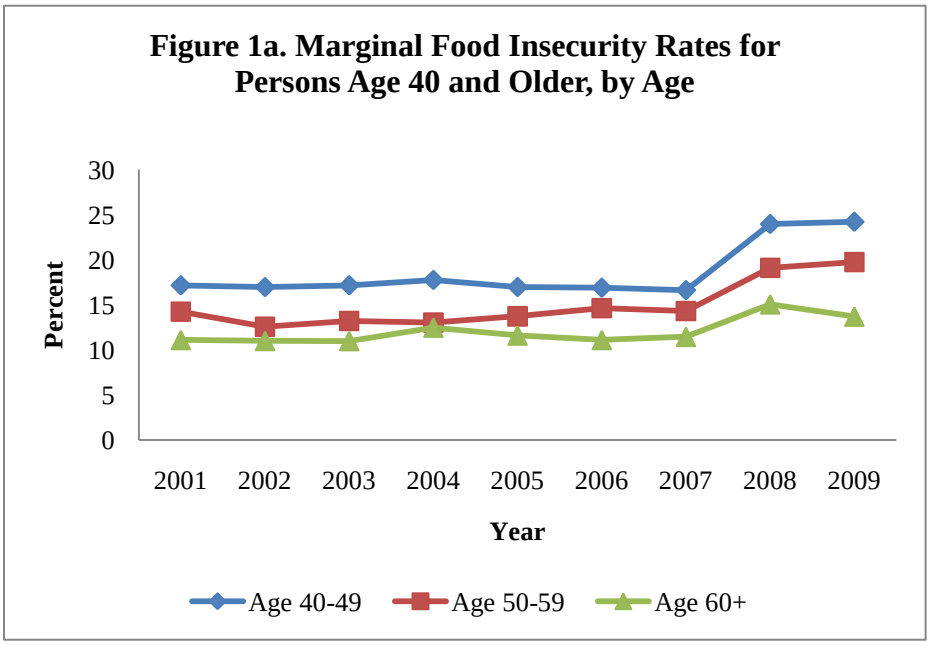
In December of each year, in addition to a wide variety of other questions, 50,000 households respond to a series of 18 questions (10 if there are no children present) that make up the Core Food Security Module (CFSM). Each question is designed to capture some aspect of food insecurity and, for some questions, the frequency with which it manifests itself. We consider three characterizations of food insecurity in this section: *marginally food insecure*, which combines the three categories of marginally food secure, low food secure, and very low food secure; *food insecure*, which combines the narrower categories of low food secure and very low food secure; and *very low food secure*. To be considered marginally food insecure means the respondent answers affirmatively to at least one question, to be food insecure means the respondent answers affirmatively to at least 3 questions on the CFSM, and to be very low food secure means that the respondent answers affirmatively to at least 8 questions in households with children and at least 5 questions in households without children.

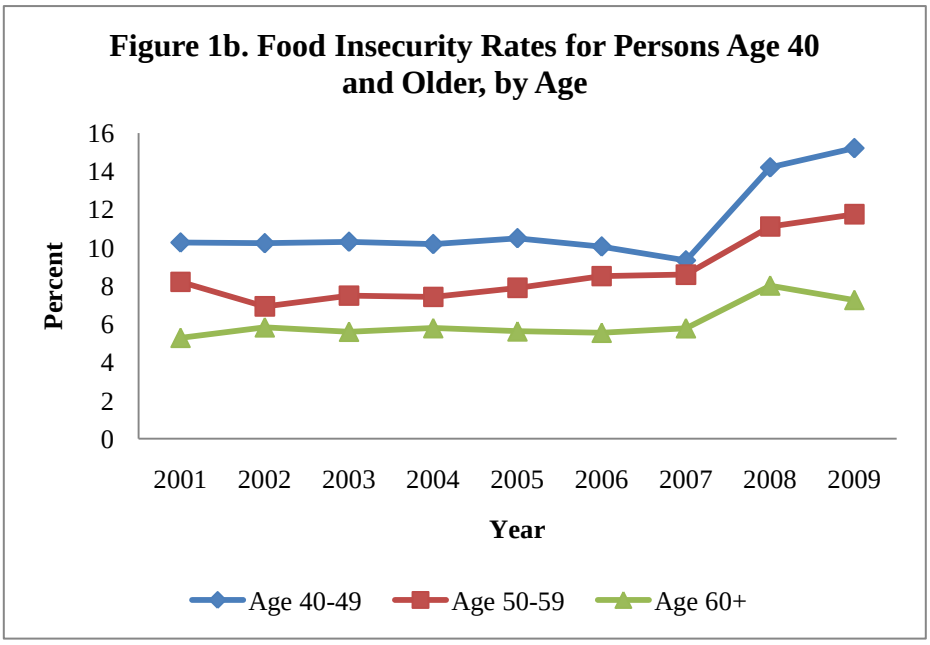
Table 1 [Appendix, pp. 53-54] contains weighted averages of selected characteristics for the whole sample age 40 and older and for individuals with income below 200% of poverty. The weight used in all analyses is the supplemental person weight provided in the December CPS survey and is used to adjust the averages to reflect the whole population age 40 and over. Among all adults age 40 and older, about 8 percent are poor, and another 14 percent have incomes between 100 and 200% of the poverty line. A majority, however, have annual incomes that place them above 200% of the poverty line. Most are white, married or widowed, a homeowner, live in a metro area, are employed, and have a high school diploma or more. When examining the subsample with incomes below 200% of the poverty line we see that compared to the general population of those over age 40, the poor and near poor are more likely to be African Americans or Hispanics, to be divorced or never married, to be a renter, to live in non-metro areas and the South, to be older, to be retired or disabled, to have lower education attainment, to receive assistance from food stamps, to have grandchildren living in the household, and to be living alone. The bottom panel of Table 1 shows that, on average, 15 percent of adults age 40 and older are marginally food insecure, 9 percent are food insecure, and 3 percent are very low food secure. Those rates, however, are two to three times higher among the population with annual

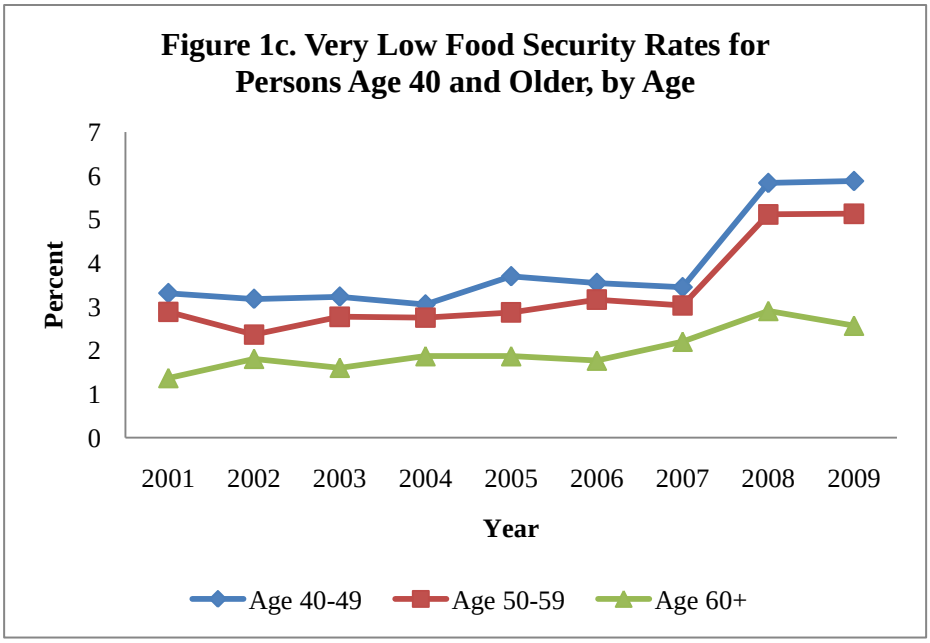
income below 200 percent of the poverty line, indicating that low incomes are a strong correlate to high rates of food insecurity.

A. Age-Specific Trends in Food Insecurity

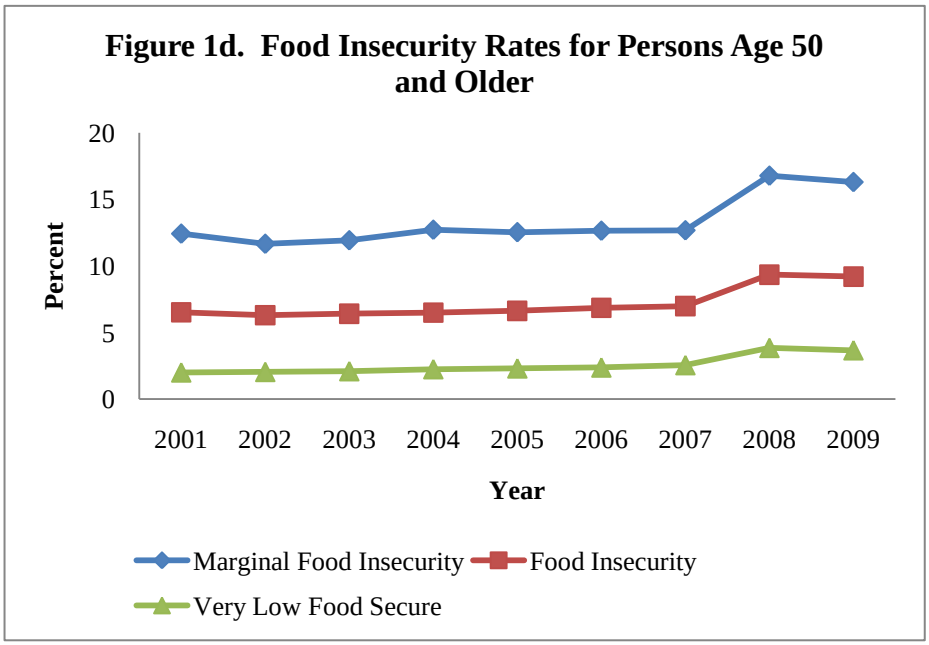
We begin our analysis of comparing food insecurity among middle age adults and seniors in Figures 1a-1c where we present trends in marginal food insecurity, food insecurity, and very low food security, respectively, for the three age groups of 40-49, 50-59, and 60+. Figure 1a shows that marginal food insecurity was quite stable from until 2007 when it jumped dramatically for all age groups. The increase in marginal food insecurity from 2007-2009 was 38 percent among 50-59 year olds, substantially above the 20 percent increase among those over 60, but less than the 46 percent increase among those in their 40s. Figure 1b shows similar trends for food insecurity as we saw for marginal food insecurity with the exception that rates of food insecurity for 40-49 year olds increased an astounding 68 percent compared to 38 percent for 50-59 year olds, and 25 percent among those over 60. We again find that very low food security rates in Figure 1c are higher for middle age adults than for seniors, but in this case adults in their 50s had comparable increases to those in their 40s (69 percent versus 71 percent). The two-year increase in very low food security among those over age 60 was 17 percent. So while senior hunger increased significantly in recent years, the increase among those 40-59 years old was considerably higher.







In Figure 1d, the results are provided for the case of all those over age 50 with the structure the same as Figures 1a-1c. The general trends mimic those for each of the age groups discussed in isolation above. Concentrating on the increases in food insecurity from 2007 to 2009 the increases are 28%, 32%, and 44%.



Using the person weights provided in the CPS we translate these percentages into the actual numbers of people affected in each age category. In 2009 alone, 10.3 million persons between the ages of 40-49 were marginally food insecure, 6.5 million were food insecure, and 2.5 million were very low food secure. Among 50-59 year olds, 8.1 million were marginally food insecure in 2009, 4.9 million were food insecure, and 2.1 million were very low food secure. Among seniors age 60 and older, the comparable numbers were 7.5 million, 3.9 million, and 1.4 million, respectively. Combining the latter two categories, among adults age 50 and older in 2009, 15.6 million persons faced the threat of hunger (i.e. marginally food insecure), 8.8 million faced the risk of hunger (i.e. were food insecure), and 3.5 million faced hunger (i.e. were low food secure). This is an increase of 66%, 79%, and 132%, respectively, from the levels of food insecurity in 2001 among this population.

In Tables 2a-2c [Appendix, pp. 55-57] we present the distribution of adults across the three levels of food insecurity for each of three age categories, 50-59, 40-49, and 60 and older. Each subcategory in each column sums to 100 percent for the respective food insecurity status. For example, in Table 2a we see that among 50-59 year olds about 52 percent of marginally food insecure have income below 200% of the poverty line, another one-third have income above 200% of the poverty line, and a remaining 16 percent do not report their income level. Comparing across columns the income distribution is shifted lower as the severity of food insecurity increases. That is, among 50-59 year olds about 25 percent of the marginally food insecure have incomes below the poverty line compared to 35 percent of the very low food secure.

There are some interesting differences in the distribution of food insecurity across the age cohorts in Tables 2a-2c. First, both 40-49 and 50-59 year olds experiencing food insecurity tend to be found higher up in the income distribution compared to the over 60 age group, i.e. the former groups tend to be more evenly spread across the distribution compared to food insecure seniors who tend to be poor or near poor. Second, middle age adults experiencing food insecurity are more likely to be married than seniors. This reflects the fact that food insecure seniors are more likely to be widowed. But we also see that food insecure middle aged adults are

much more likely to be never married. Third, middle age adults suffering from food insecurity are more likely to live in a metro area and outside the South than are seniors over 60. And as expected the middle aged food insecure are more likely to be found in employment and more likely to have some college or higher. What is striking is that the share of disabled in each food insecurity category is similar for 40-49 year olds and 60+, but is markedly higher by about 10 percentage points for those 50-59. This high rate of disability points to a particular vulnerability for the onset of food insecurity among those persons nearing retirement.

In Table 2d [Appendix, pp. 58] we present the results for all persons in the 50+ age category. The results, in the main, look similar to the 60+ age category. The main differences are that there are a higher proportion of disabled persons in the 50+ age group (not unexpected given that there are not many retired people in the 50-59 age group) and the food insecure population is more educated in the 50+ age group (perhaps reflecting the increasing education attainment over time).

B. Age-Specific Differences in Food Insecurity by Poverty-Status

In Figures 2a-2c and the accompanying Tables 3a-3c we present a parallel set of figures and tables for those persons with incomes below 200 percent of the poverty line. Comparing the trends in Figure 2 to those in Figure 1 we see that while the levels of food insecurity among the poor and near poor are much higher in any given year than for the general population of those over age 40, there is not nearly as dramatic an increase in food insecurity after 2007 for those with incomes below 200 percent of poverty with the possible exception of very low food security in Figure 2c. For example, marginal food insecurity for adults between ages 50 and 59 increased 38 percent between 2007 and 2009, but only 8 percent for those with incomes below 200% of the poverty line. The increases for rates of food insecurity and very low food security were 37 and 69 percent for all adults age 50-59, compared to 6 and 18 percent for the same age group but with income below 200 percent of poverty. Thus, the recessionary increase in adult food insecurity was most pronounced among those with higher incomes. It is worth noting, however, that part of the reason for a more muted recessionary boost in food insecurity among the poor and near poor owes to the fact that for low-income 50-59 year olds food insecurity rates have demonstrated a general increase over the past decade.

Figure 2a. Marginal Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Age

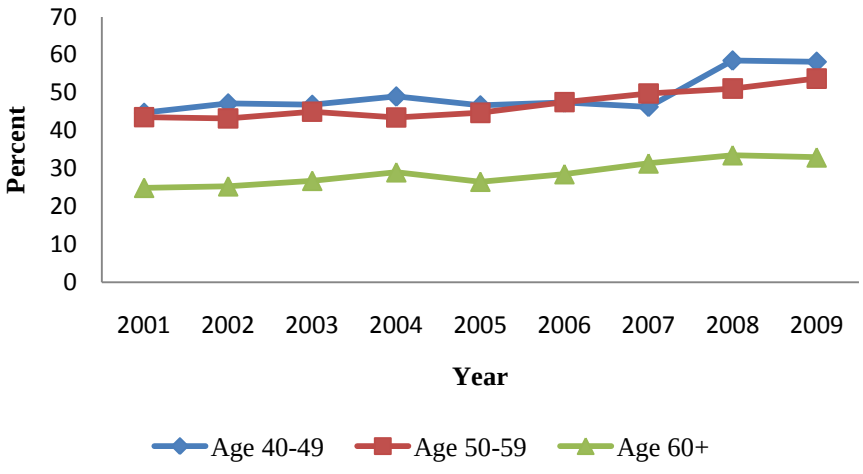
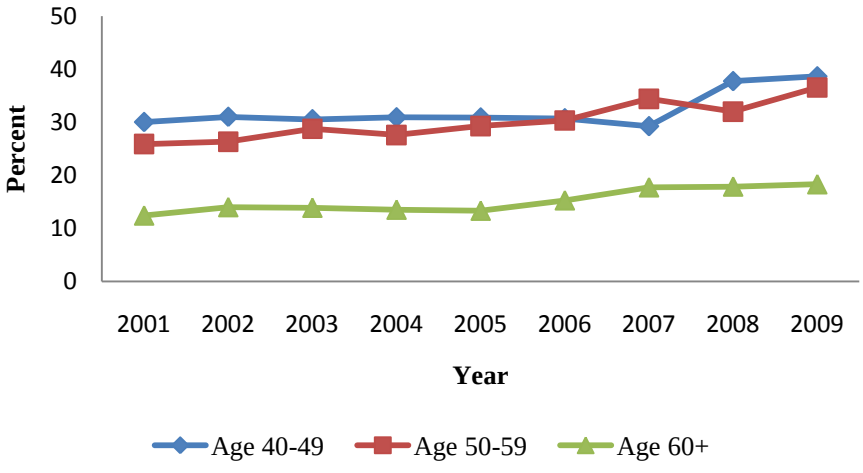
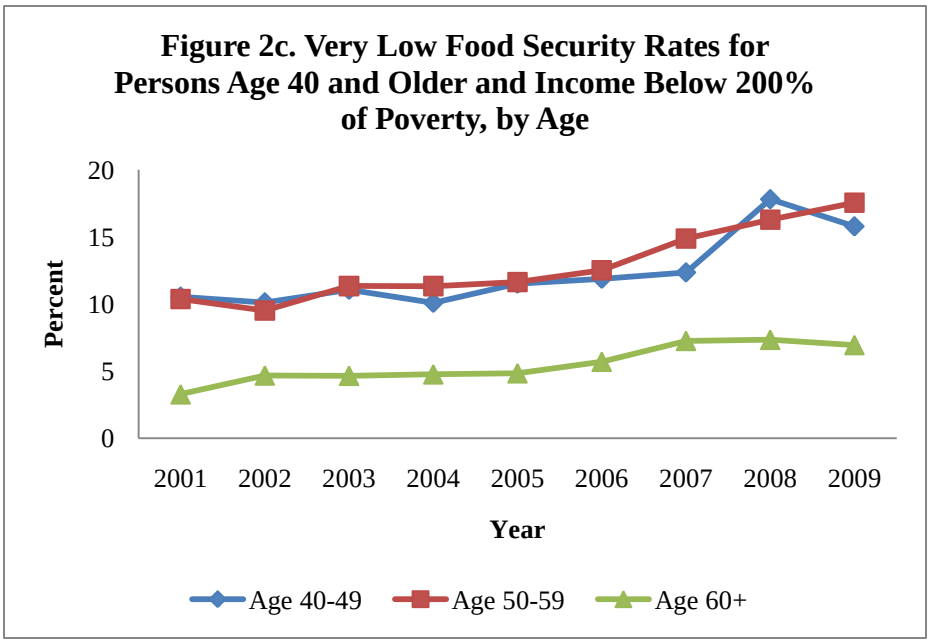
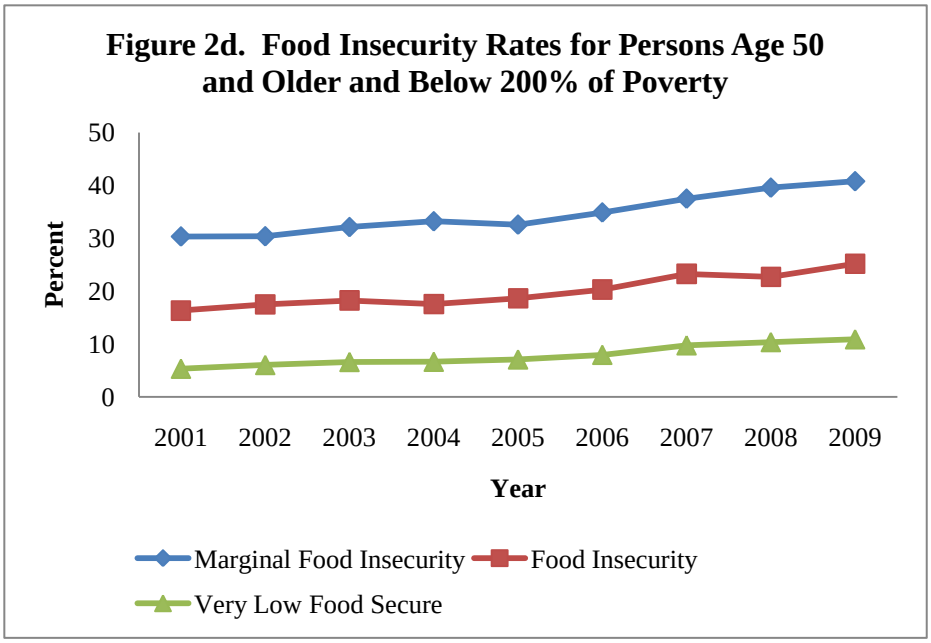


Figure 2b. Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Age





In Figure 2d, the results are provided for the case of all those over age 50 with incomes under 200% of the poverty line. On this graph, the results for marginal food insecurity, food insecurity, and very low food security are all displayed. By increasing the sample size through the combination of ages, a clearer picture emerges over the past half-decade. Namely, food insecurity rates have been increasing steadily under each measure since 2005 and there was no acceleration of food insecurity rates after 2007 for this group. This general pattern should be contrasted with that found in Figure 1d where there was a marked increase after 2007.



Tables 3a-3c [Appendix, pp. 59-61] demonstrate that within each food insecurity category, the poor and near poor of any age group (50-59, 40-49, 60+) have higher shares of never married, living in non-metro areas, of being disabled, of being a high school dropout, and of receiving benefits through SNAP. Of these, rates of disability stand out prominently as one in two 50-59 year olds experiencing either food insecurity or very low food security are disabled. The past two decades have witnessed strong secular increases in disability (Autor and Duggan 2006), and spending on disability programs has nearly doubled in inflation-adjusted terms over the last 10 years (Scholz et al. 2009), but even with this additional expenditure it appears that disabled persons remain highly exposed to food insecurity. In Table 3d [Appendix, pp. 62] we combine the 50-59 and 60+ age groups. The results also manifest the similar patterns noted above.

In Tables 4a-4d [Appendix, pp. 63-66], we present results when we restrict the sample to those below 300% of the poverty line. We have chosen this cutoff insofar as it is roughly the median income for a household headed by a person age 45-55 in 2009. The breakdowns of the food insecure populations by demographic categories are quite similar to those found in the under 200% of the poverty line category. The primary differences are that, for the under 300% of the poverty line group, there are fewer people in the under 50% of the poverty line group (this is expected given the higher income cutoff), more married people, more homeowners, and more employed people. These final third differences are also as expected given that these are characteristics generally associated with persons higher in the income distribution.

C. Age-Specific Differences in Food Insecurity by Race/Ethnicity

We next examine age-specific trends in food insecurity by race and ethnicity. In order to maintain adequate sample sizes for this analysis we again pool across three age groups of the 40s, 50s, and 60 and older. Within these two broad age categories we present trends in food insecurity for whites, African Americans, other race, and Hispanic ethnicity. Figures 3a-3c depict trends in marginal food insecurity, food insecurity, and very low food secure, respectively. The figures show that any age gap in food insecurity between those in their 50s compared to 40s or 60+ is dwarfed by a sustained race/ethnicity gap. For example, in Figure 3 we see that the trends in food insecurity are similar across race/ethnicity/age groups, and thus the increase in food insecurity after 2007 was not experienced predominantly by a specific race/ethnicity-age group but instead was widespread across young and old, white and black, and Hispanics. That is, African American or Hispanic 50-59 year olds had a sustained level of food insecurity that was double or more their white counterparts. We see a similar race/ethnicity gap among the over 60 population as well. The distinct race/ethnicity gap is also manifest when we look at the over 50 age category in Figures 4a-4c. (These replicate the analyses in Figures 3a-3c except only for the over 50 age group.)

Figure 3a. Marginal Food Insecurity for Persons Age 40 and Older, by Race/Ethnicity and Age

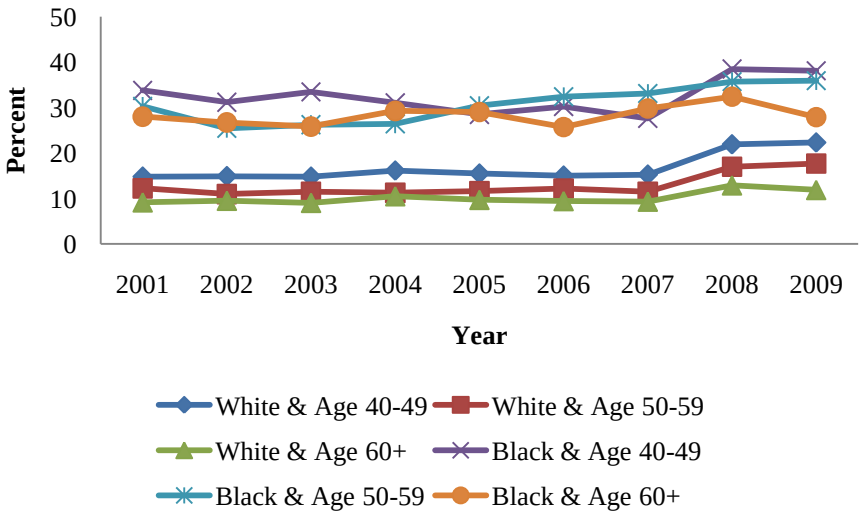


Figure 3a cont. Marginal Food Insecurity Rates for Persons Age 40 and Older, by Race/Ethnicity and Age

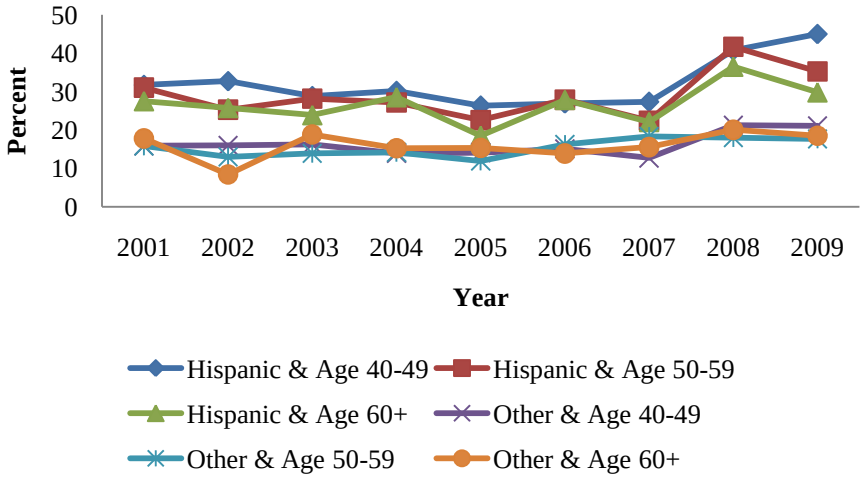


Figure 3b. Food Insecurity Rates for Persons Age 40 and Older, by Race/Ethnicity and Age

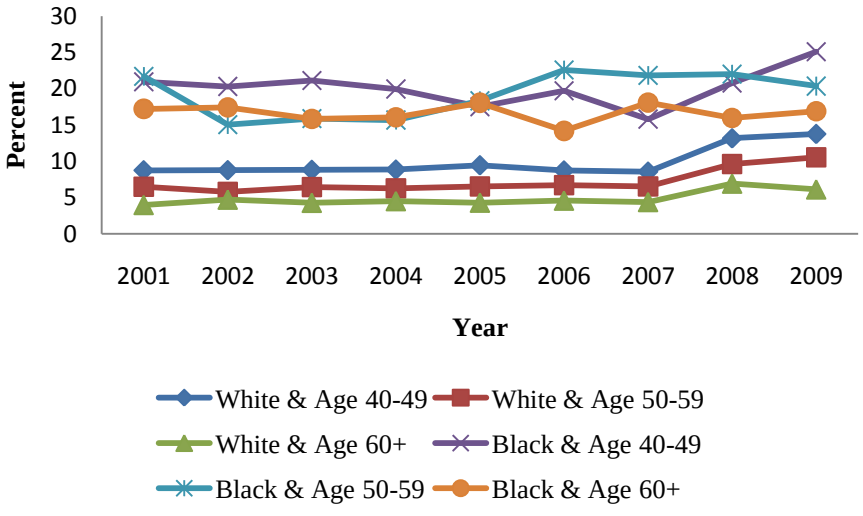


Figure 3b cont. Food Insecurity Rates for Persons Age 40 and Older, by Race/Ethnicity and Age

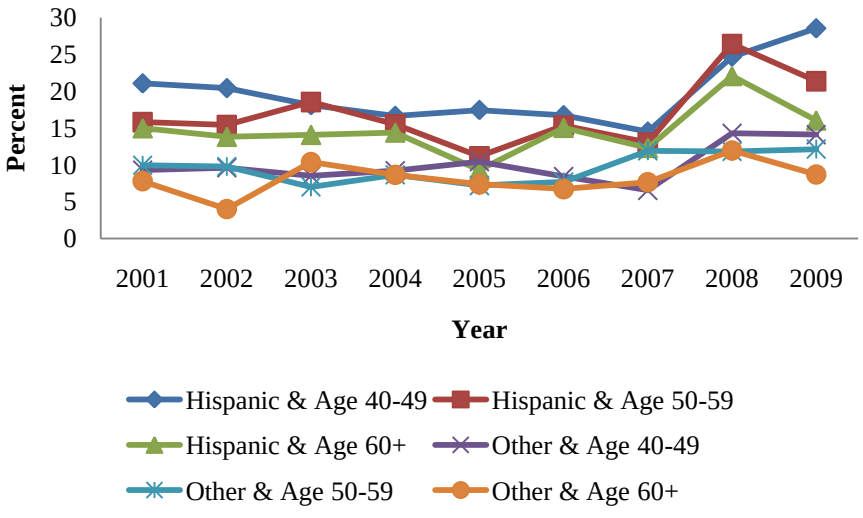


Figure 3c. Very Low Food Security for Persons Age 40 and Older, by Race/Ethnicity and Age

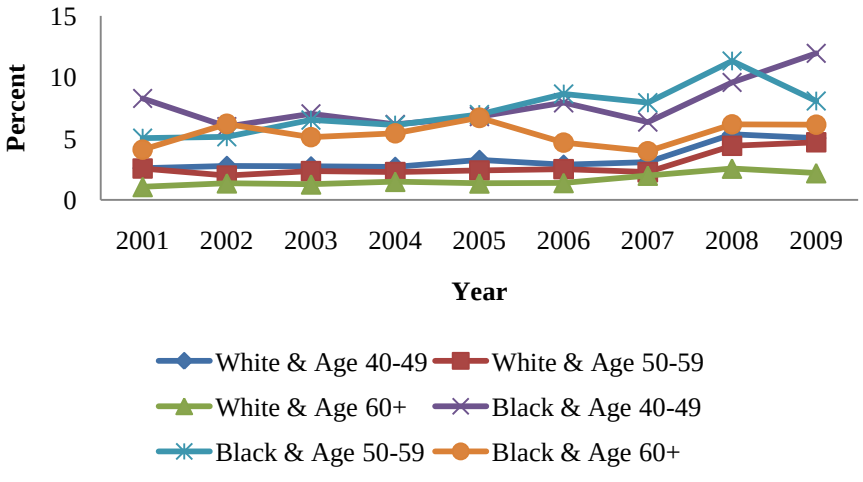
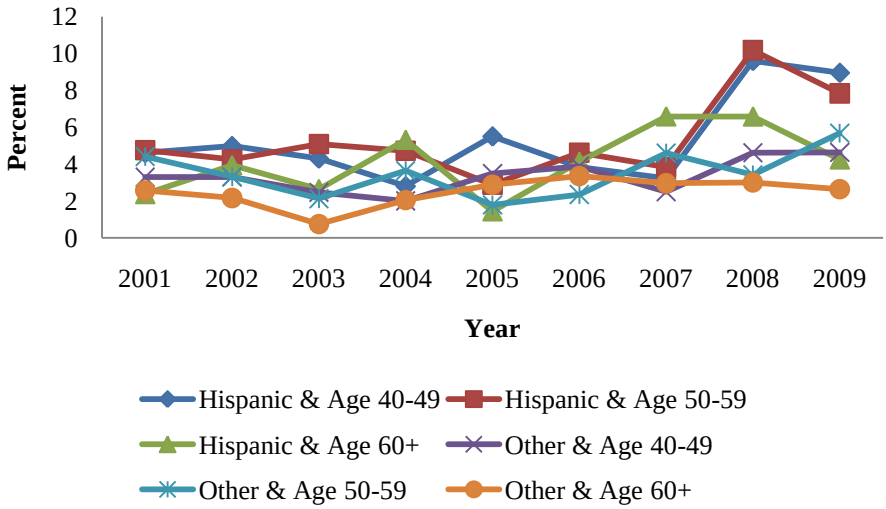


Figure 3c cont. Very Low Food Security for Persons Age 40 and Older, by Race/Ethnicity and Age



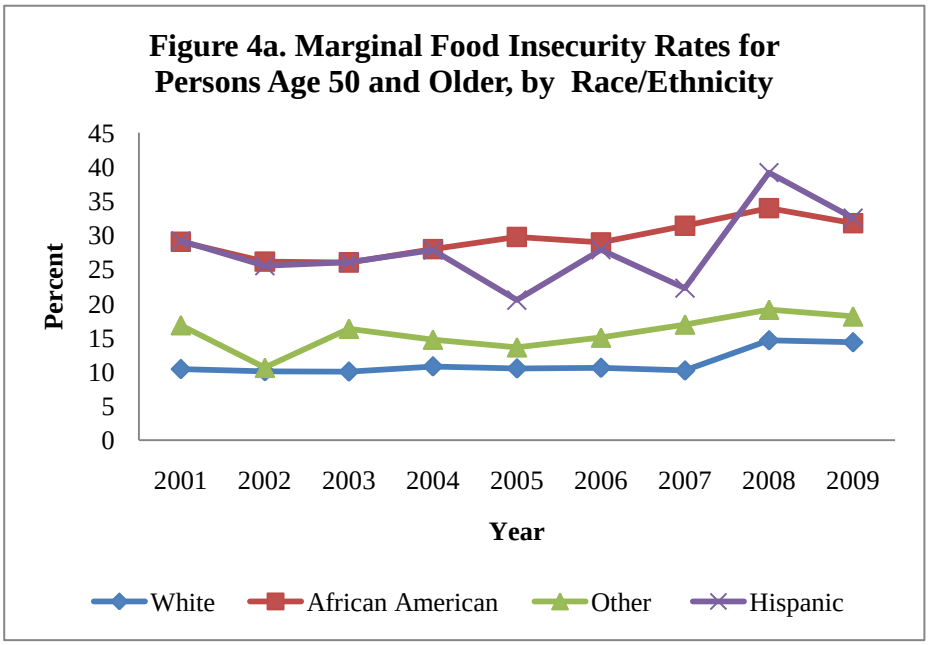


Figure 4a. Marginal Food Insecurity Rates for Persons Age 50 and Older, by Race/Ethnicity
Percent
45
40
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year
White
African American
Other
Hispanic

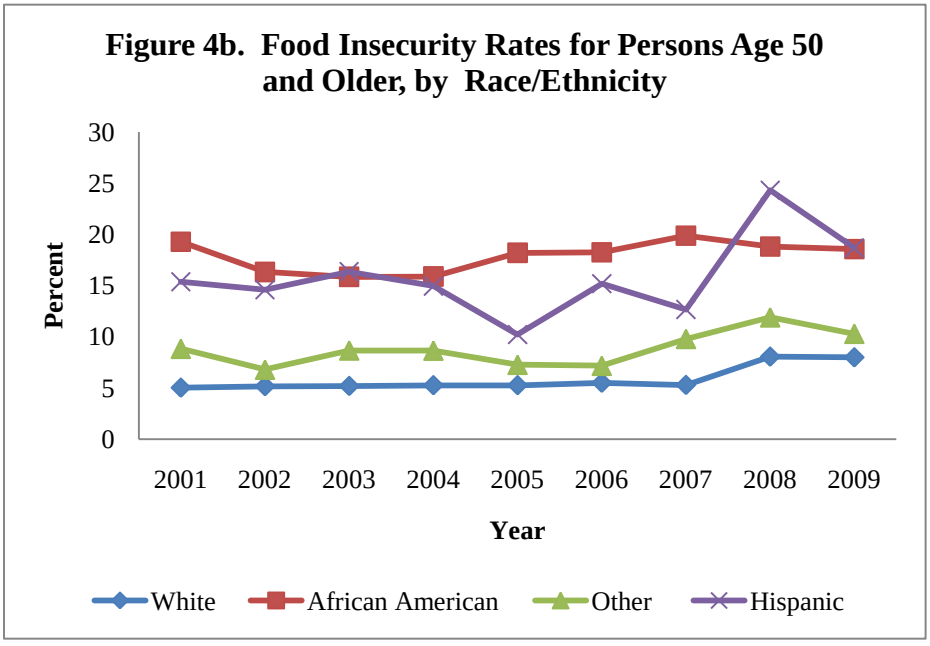
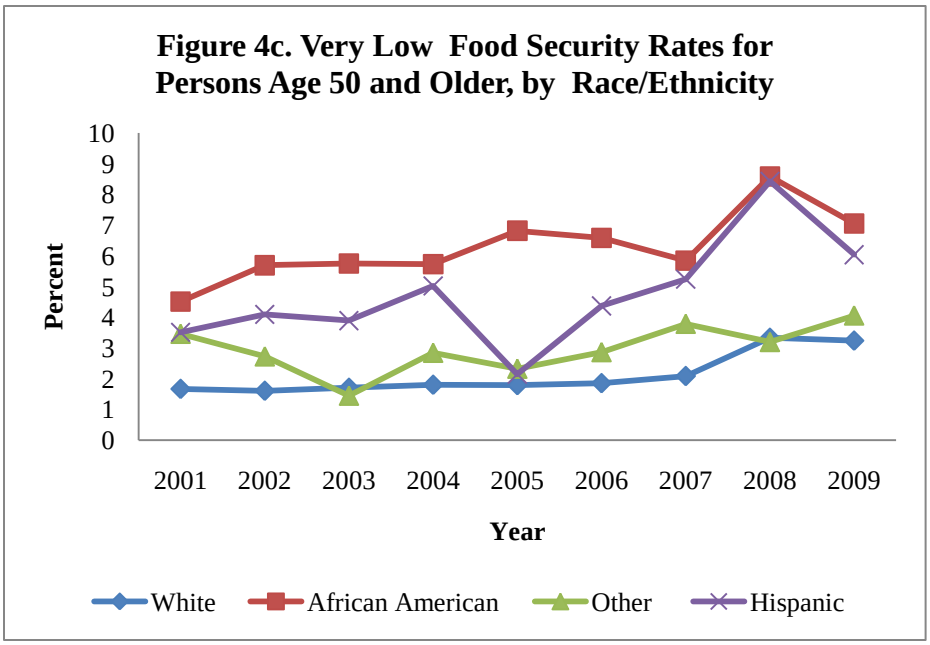


Figure 4b. Food Insecurity Rates for Persons Age 50 and Older, by Race/Ethnicity
Percent
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year
White
African American
Other
Hispanic



The picture is a bit more muddied for the subsample of poor and near-poor persons in Figures 5a-5c. That is, the race-age gap in food insecurity is much smaller in the population of persons with incomes less than 200 percent of poverty, typically only 25 percent higher instead of double that we saw in Figure 3. Like in Figure 3 this gap was fairly stable over time, with some evidence of narrowing after 2007 between whites and African Americans and widening between whites and Hispanics. When we examine things just for those aged 50 and above (Figures 6a-6c), a similar story holds. Finally, in Figures 7a through 7c we present results for those aged 50 and above when we restrict the sample to those with incomes below 300% of the poverty line. The difference by race/ethnicity is now more pronounced then when we limit the sample to those with incomes below 200% of the poverty line. The distinction is especially present for the marginal food insecurity breakdown (Figure 7a). In the main, by using 300% of the poverty line as the sample restriction, the difference by race/ethnicity is a mix between the relationship for under 200% of the poverty line and for all income levels.

Figure 5a. Marginal Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Race and Age

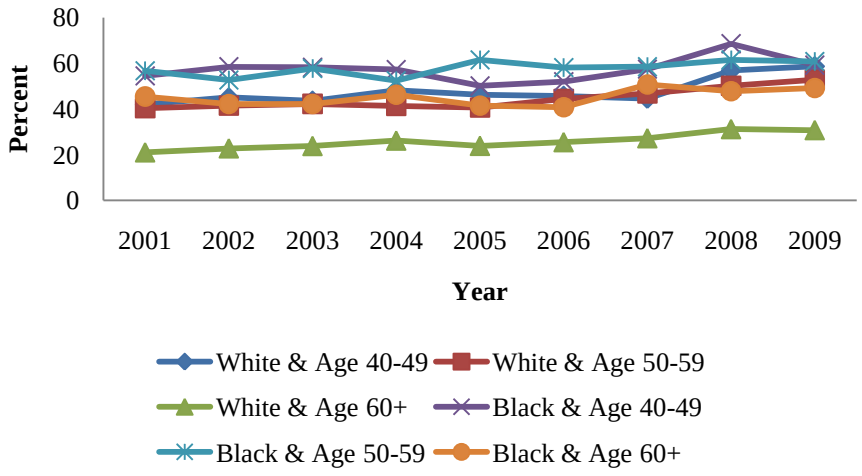


Figure 5a cont. Marginal Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Race/Ethnicity and Age

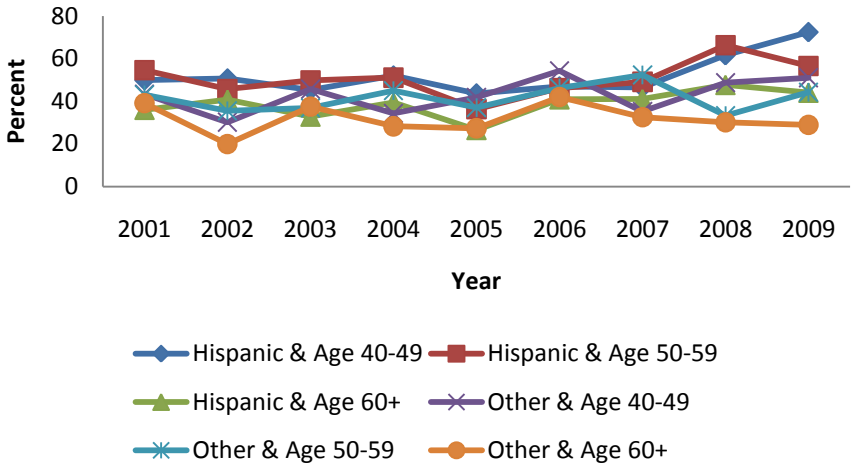


Figure 5b. Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Race and Age

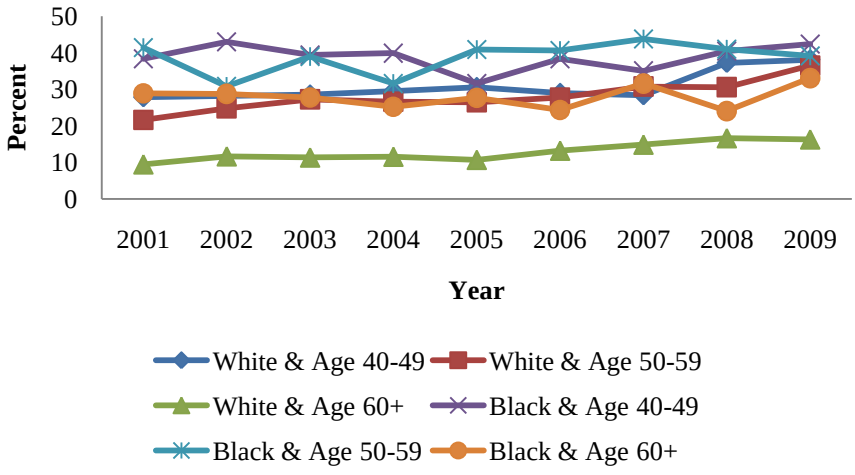


Figure 5b cont. Food Insecurity Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Race/Ethnicity and Age

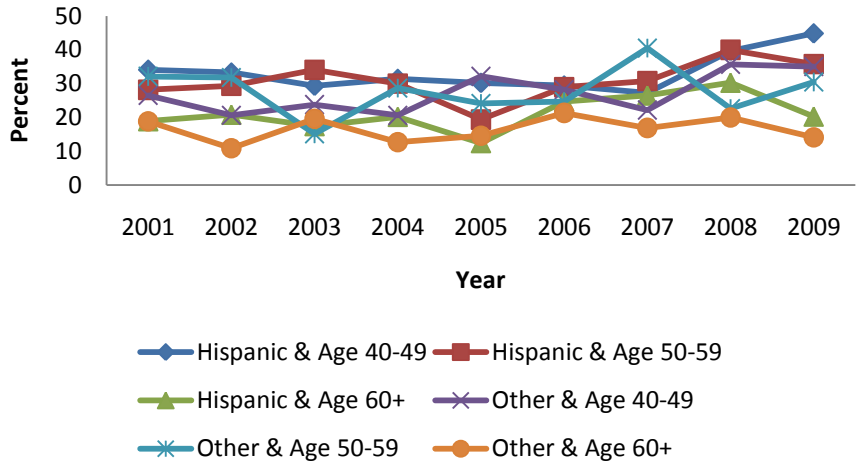


Figure 5c. Very Low Food Security Rates for Persons Age 40 and Older and Income Below 200% of Povert, by Race/Ethnicity and Age

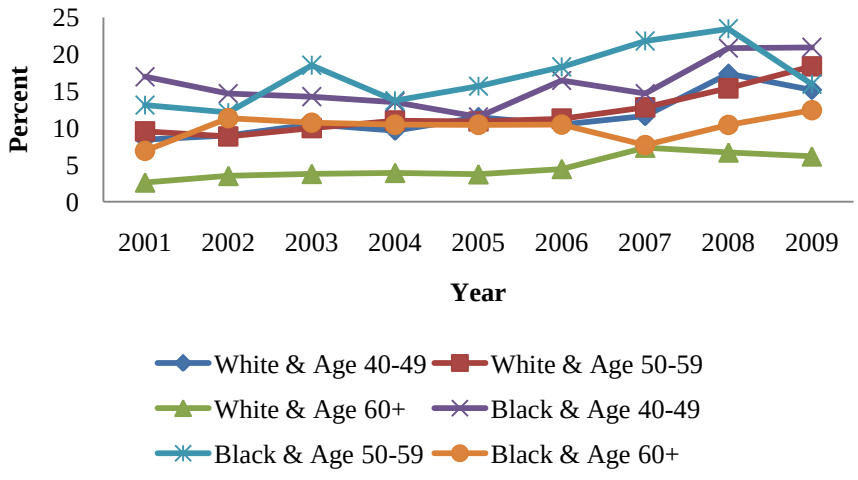
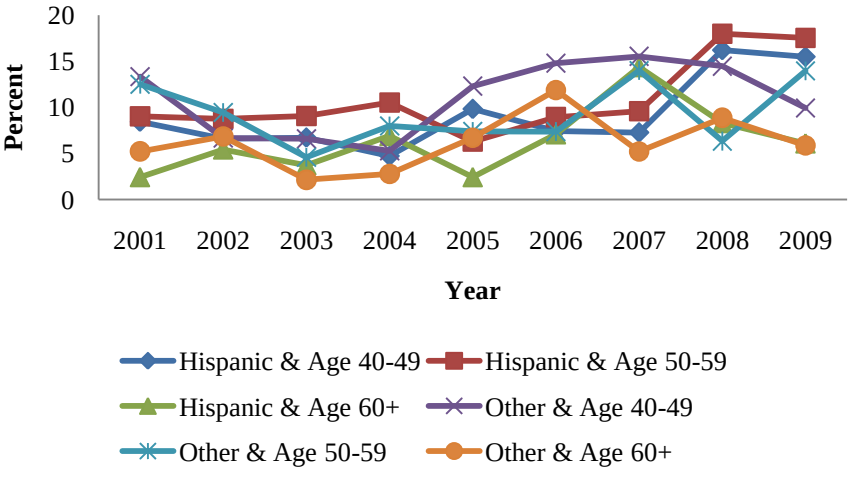


Figure 5c cont. Very Low Food Security Rates for Persons Age 40 and Older and Income Below 200% of Poverty, by Race/Ethnicity and Age



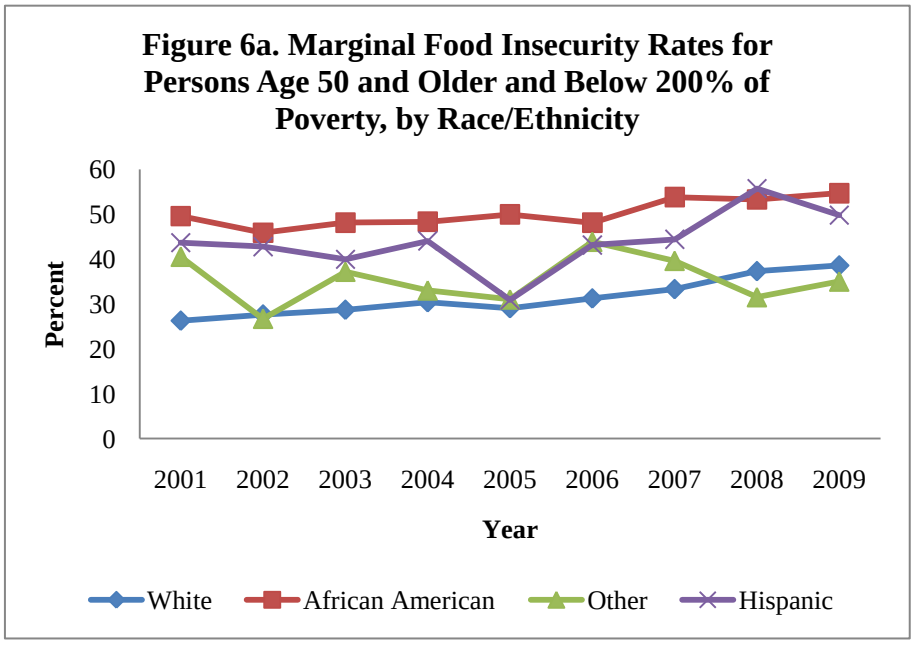


Figure 6a. Marginal Food Insecurity Rates for Persons Age 50 and Older and Below 200% of Poverty, by Race/Ethnicity
Percent
60
50
40
30
20
10
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year
White
African American
Other
Hispanic

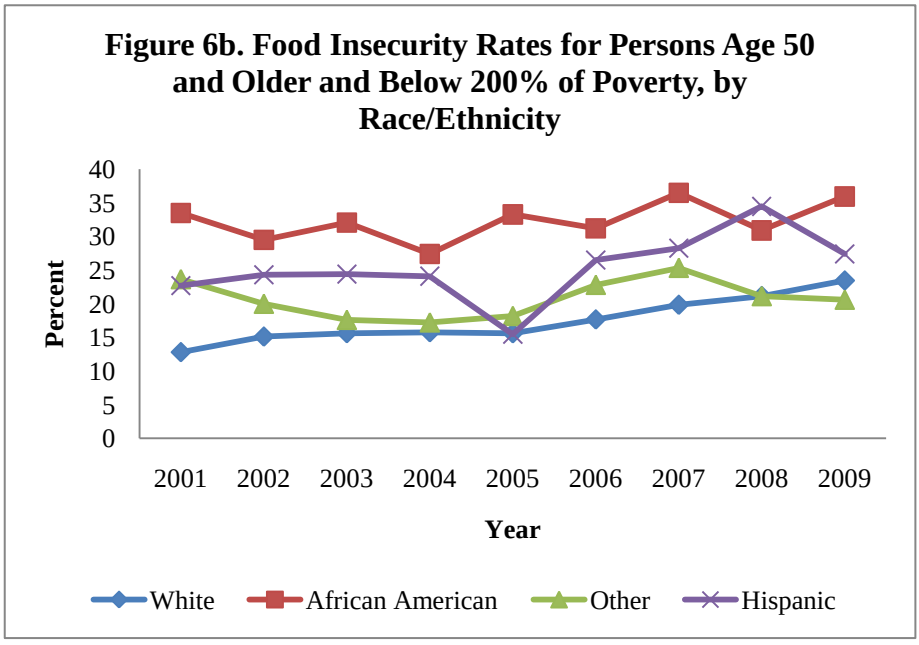


Figure 6b. Food Insecurity Rates for Persons Age 50 and Older and Below 200% of Poverty, by Race/Ethnicity
Percent
40
35
30
25
20
15
10
5
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year
White
African American
Other
Hispanic

Figure 6c. Very Low Food Security Rates for Persons Age 50 and Older and Below 200% of Povery, by Race/Ethnicity

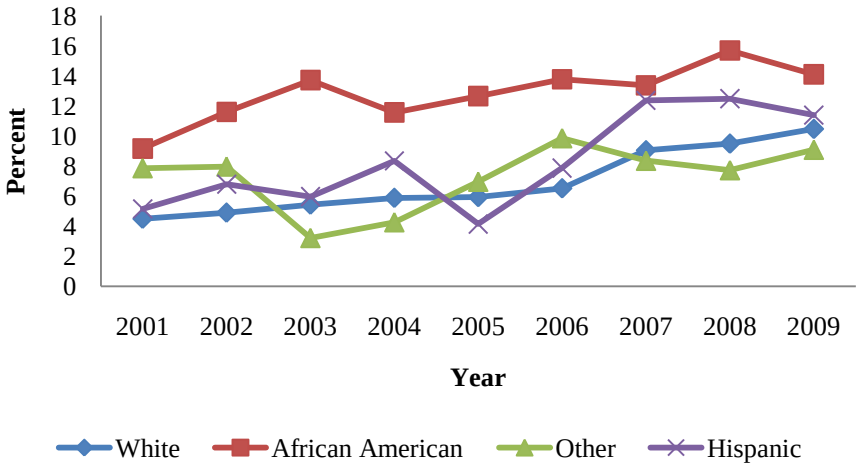


Figure 7a. Marginal Food Insecurity Rates for Persons Age 50 and Older and Below 300% of Povery, by Race/Ethnicity

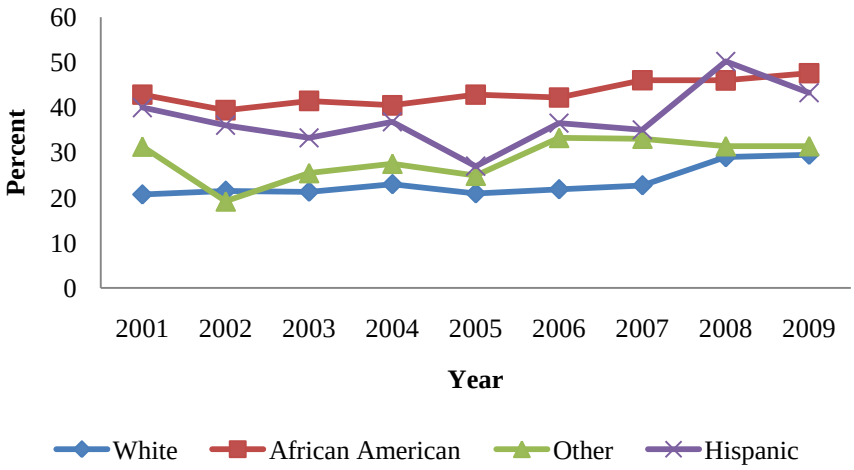


Figure 7b. Food Insecurity Rates for Persons Age 50 and Older and Below 300% of Poverty, by Race/Ethnicity

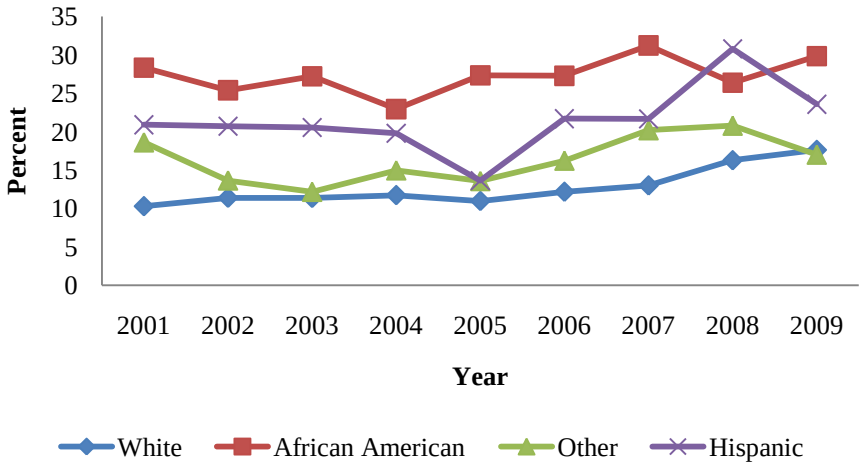
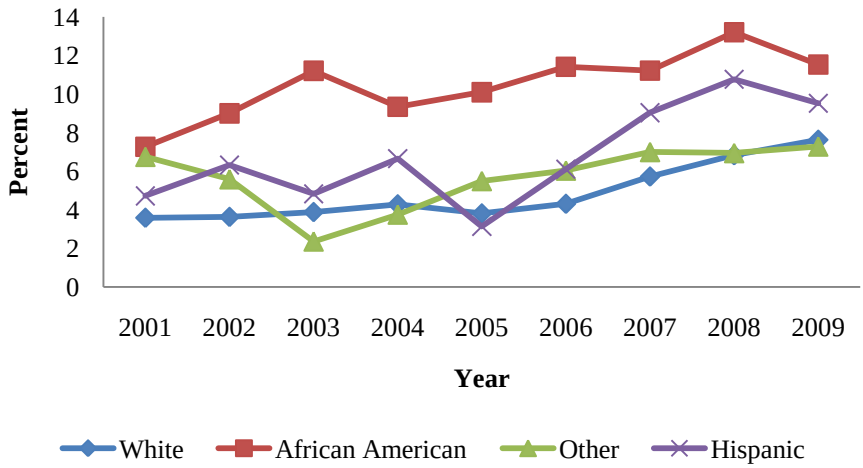


Figure 7c. Very Low Food Security Rates for Persons Age 50 and Older and Below 300% of Poverty, by Race/Ethnicity



D. Age-Specific Differences in Food Insecurity by State and Metropolitan Area

In this subsection we present the geographic distribution of age-specific food insecurity by state and major metropolitan areas (those metro areas with 1,000,000 or more residents). In Tables 5a-5c [Appendix, pp. 67-69] we present state-specific rates of three categories of food insecurity for persons age 50-59, 40-49, and 60 and older, respectively. We pool the data over the 2001-2009 period in order to maintain adequate sample sizes for the calculations.

Across the 50 states and District of Columbia Table 5a shows that among 50-59 year olds rates of marginal food insecurity range from 8 percent in North Dakota to 25.5 percent in Mississippi, rates of food insecurity range from 3.8 in Massachusetts to 13.8 percent in Mississippi, and rates of very low food secure range from 1.3 in North Dakota to 6.2 percent in New Mexico. The concomitant ranges among 40-49 year olds in Table 5b are (10.6, 27.4), (6.3, 15.98), (2.0, 5.9), and for persons 60 and older in Table 5c are (4.23, 21.27), (1.58, 12.45), (0.36, 4.58). While the state rates tend to be highest among 40-49 year olds and decline with age, in each category the ranges span roughly 17, 10, and 4 percentage points, and thus the cross-state inequality in food insecurity increases with age. A common metric of inequality is the coefficient of variation (CV), which measures the ratio of the standard deviation to the mean of a variable. The state CVs for marginal food insecurity, food insecurity, and very low food security are 0.23, 0.26, and 0.30, respectively, for 50-59 year olds in Table 5a. The comparable numbers are 0.2, 0.22, and 0.24 for 40-49 year olds in Table 5b, and 0.28, 0.35, and 0.39 for 60+ in Table 5c.

Box 1. Top Ten States in Terms of Food Insecurity by Age Group

40-49 Year Olds		50-59 Year Olds		Age 60 and Older	
AR	15.98	MS	13.79	MS	12.45
OK	15.97	NM	12.37	NM	10.01
MS	15.86	AZ	12.08	TX	9.67
TX	14.32	TX	11.33	SC	9.66
UT	13.80	SC	11.27	AR	9.61
ME	13.29	AL	11.07	GA	8.74
NM	13.21	NC	10.75	LA	8.32
SC	13.13	OR	10.57	AL	8.03
TN	13.08	MO	10.56	NC	7.97
FL	12.82	OH	10.41	OK	6.66

Based on the middle columns in each of Tables 5a-5c, seven of the ten states with the highest rates of food insecurity are in the South among 40-49 year olds, six are in the South among 50-59 year olds, and eight are in the South among those persons age 60 and older. Of these states three states overlap the three age groups—Mississippi, South Carolina, and Texas.

In Table 5d [Appendix, pp. 70], we consider state-level estimates akin to those in Tables 5a-5c except for the 50 and above age group. Figures 8a-8c depict the state-level estimates as a map of the U.S. In considering marginal food insecurity, the top three states are Mississippi, Arkansas, and New Mexico. The top three for food insecurity and very low food security are the same for each group: Mississippi, New Mexico, and Texas.

Figure 8a: State Marginal Food Insecurity Rates for Adults Age 50 and Older

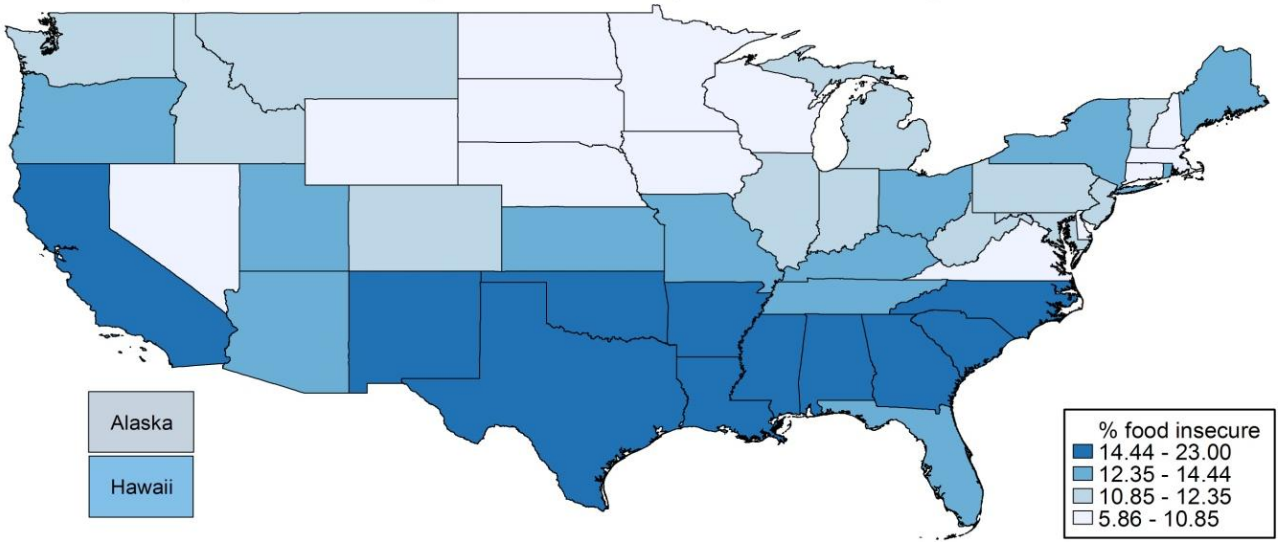


Figure 8b: State Food Insecurity Rates for Adults Age 50 and Older

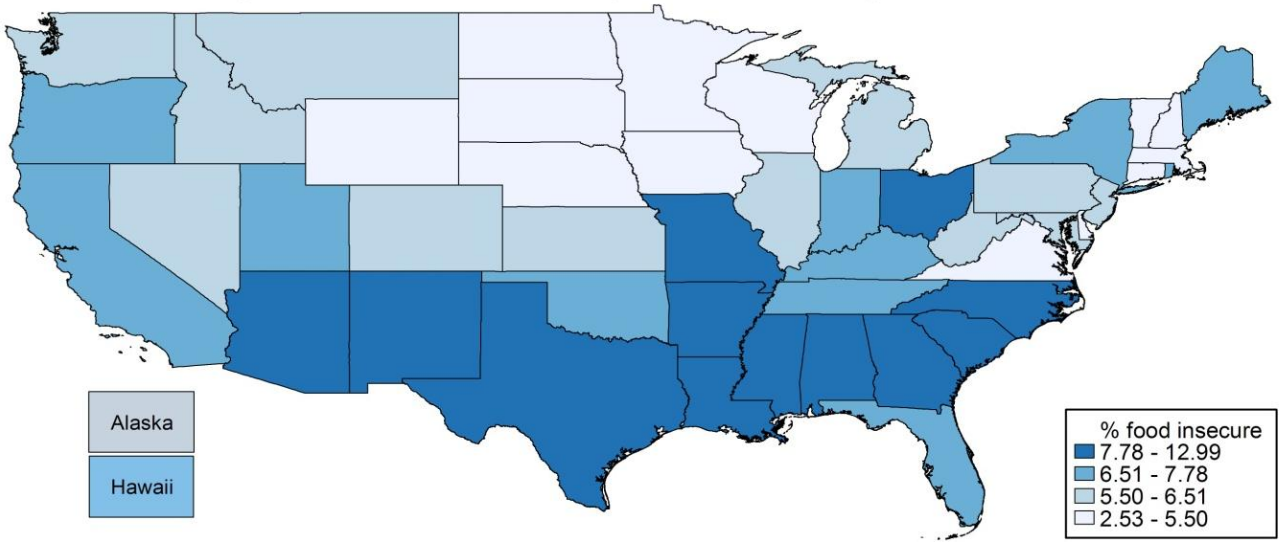
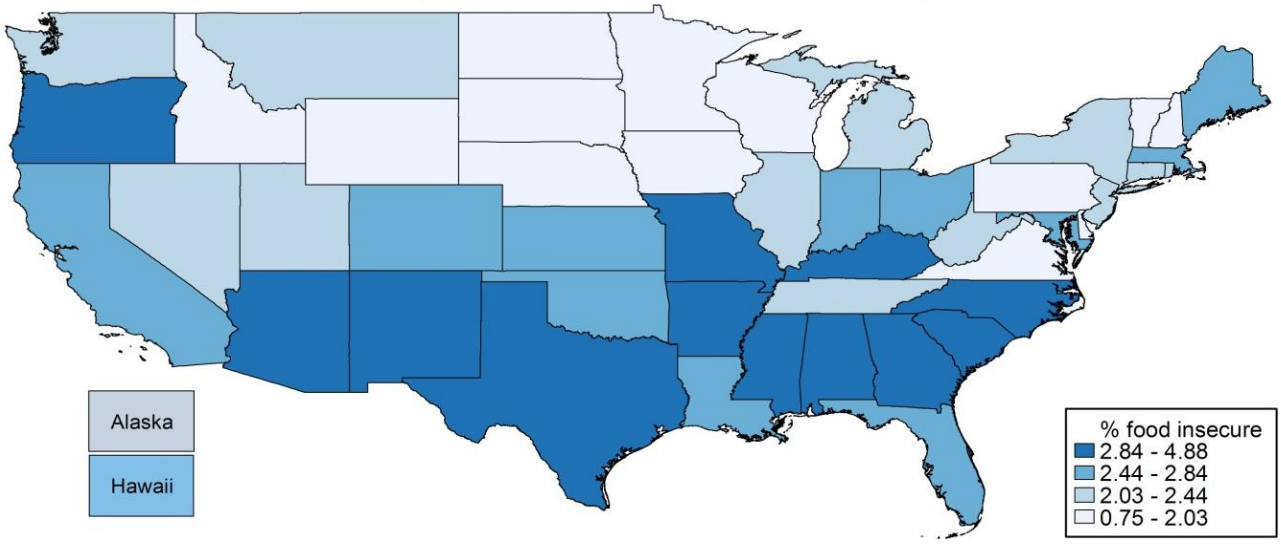


Figure 8c: State Very Low Food Security Rates for Adults Age 50 and Older



In Tables 6a-6c [Appendix, pp. 71-73] we record the parallel set of state rates of food insecurity, but again in this instance restrict attention to those persons with incomes below twice the poverty line. Relative to the population of persons age 40, the range of state food insecurity rates for the poor and near poor is much wider, from a low of 9 percentage points among the very low food secure over age 60 to 36 percentage points among the marginally food insecure ages 40-49.

Nevertheless, because the mean is much higher for this subpopulation we once again find that the cross-state inequality in food insecurity rates as measured by the CV is increasing in age. We do find greater geographic disbursement in terms of the highest state food insecurity rates (see Box 2). Among the poor and near poor, only five of the top ten states are in the South among each of 40-49 and 50-59 year olds, and seven of the top ten among the over 60 age group. In this case only Mississippi and Texas overlap across all three age groupings.

In Table 6d [Appendix, pp. 74] we consider the breakdown of states for the 50+ age category and with incomes below two times the federal poverty line. Figures 9a-9c depict the state rates as a map. The three states with the highest food insecurity rates here are Mississippi, Arkansas, and Georgia.

Box 2. Top Ten States in Terms of Food Insecurity by Age Group and with Income less than 200% of Poverty

40-49 Year Olds		50-59 Year Olds		Age 60 and Older	
OK	41.90	MO	38.70	MS	26.51
UT	40.12	AZ	38.49	TX	21.19
MO	40.08	OR	37.08	NM	20.88
WA	38.48	AK	36.84	AR	20.33
ME	38.06	GA	36.42	SC	20.27
MS	36.95	MS	34.72	GA	20.18
AR	36.42	MD	33.89	AL	18.97
OH	35.36	TX	33.36	MD	18.69
TX	35.34	CT	33.29	AZ	17.76
IN	34.87	IN	33.29	LA	17.60

Figure 9a: State Marginal Food Insecurity Rates for Adults Age 50 and Older, Under 200% FPL

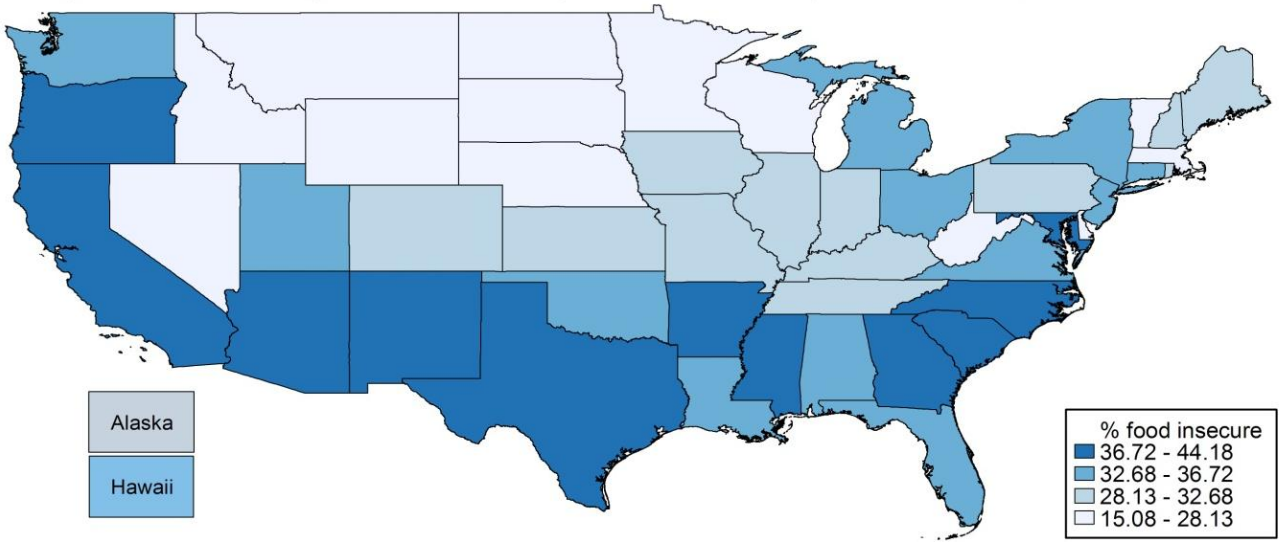


Figure 9b: State Food Insecurity Rates for Adults Age 50 and Older, Under 200% FPL

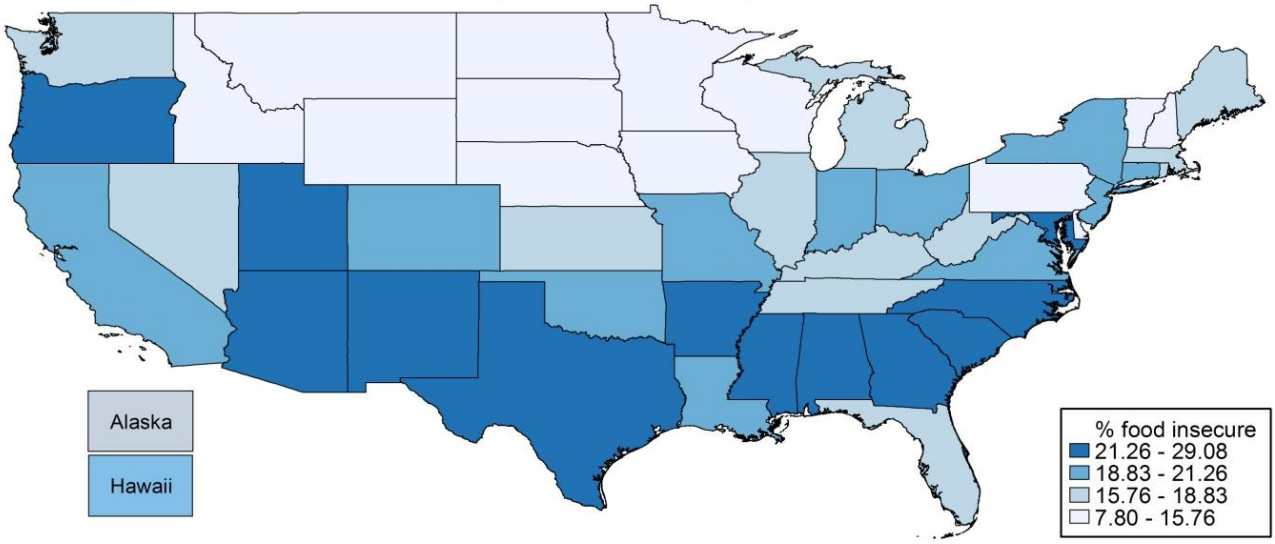
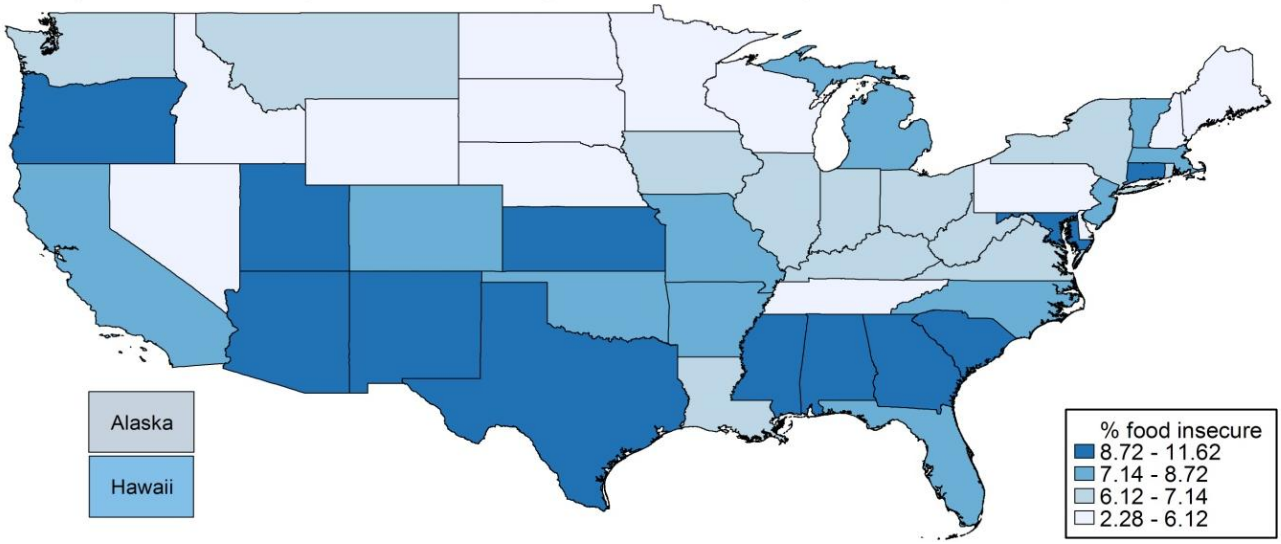


Figure 9c: State Very Low Food Security Rates for Adults Age 50 and Older, Under 200% FPL



In Tables 7a-7d [Appendix, pp. 75-78] we consider another breakdown – households with incomes below 300% of the poverty line. Since we are still conditioning on income, the dispersion of food insecurity rates is not as great as when all incomes are included but there is more dispersion than when only those with incomes under 300% of the poverty line are included. For the 50-59 age group (Table 7a), the top three states in terms of food insecurity rates are Arkansas, Missouri, and Arizona. For the 40-49 and 60+ age groups, the top three states are, respectively, the District of Columbia, Missouri, and Mississippi and Mississippi, Texas, and Georgia. When we consider the 50+ age group with incomes below three times the federal poverty line (Table 7d and Figures 10a-10c), the top three states are Mississippi, Texas, and Arkansas.

Figure 10a: State Marginal Food Insecurity Rates for Adults Age 50 and Older, Under 300% FPL

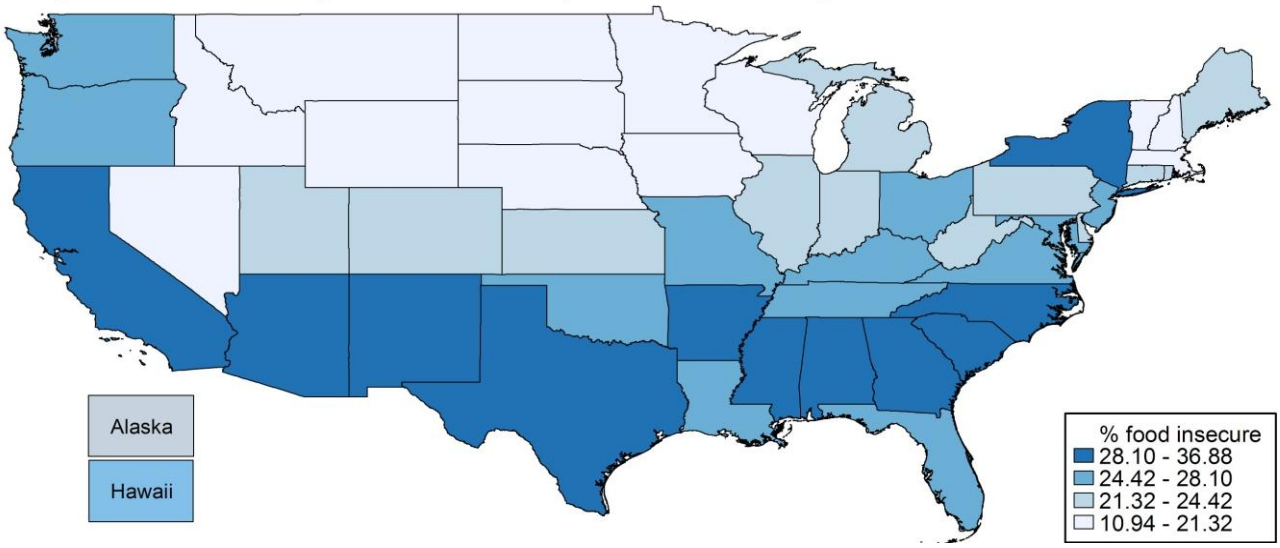


Figure 10b: State Food Insecurity Rates for Adults Age 50 and Older, Under 300% FPL

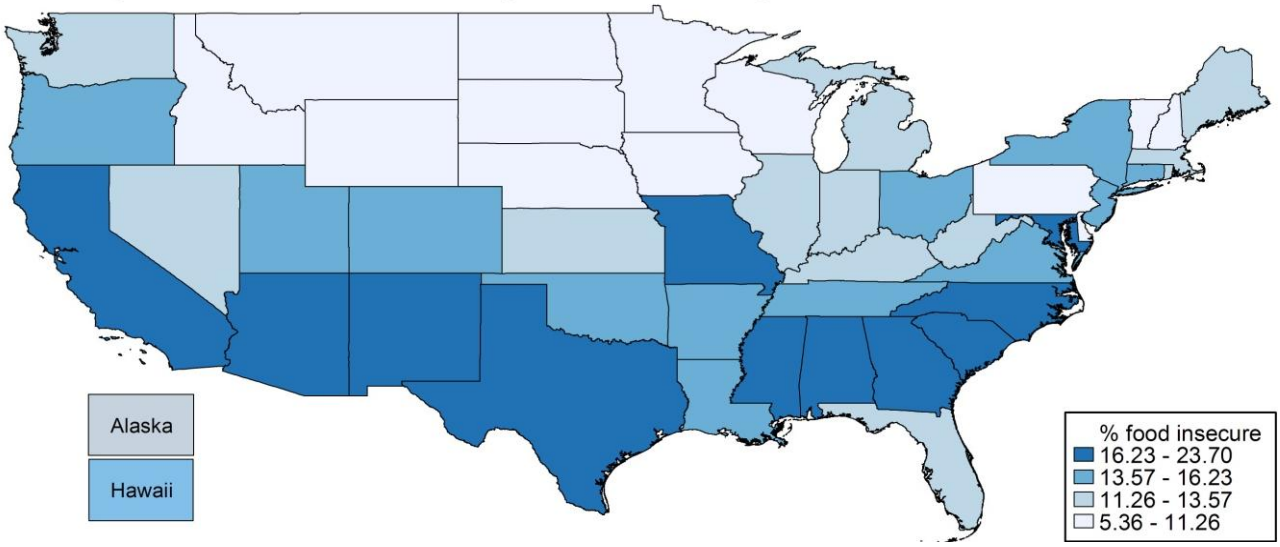
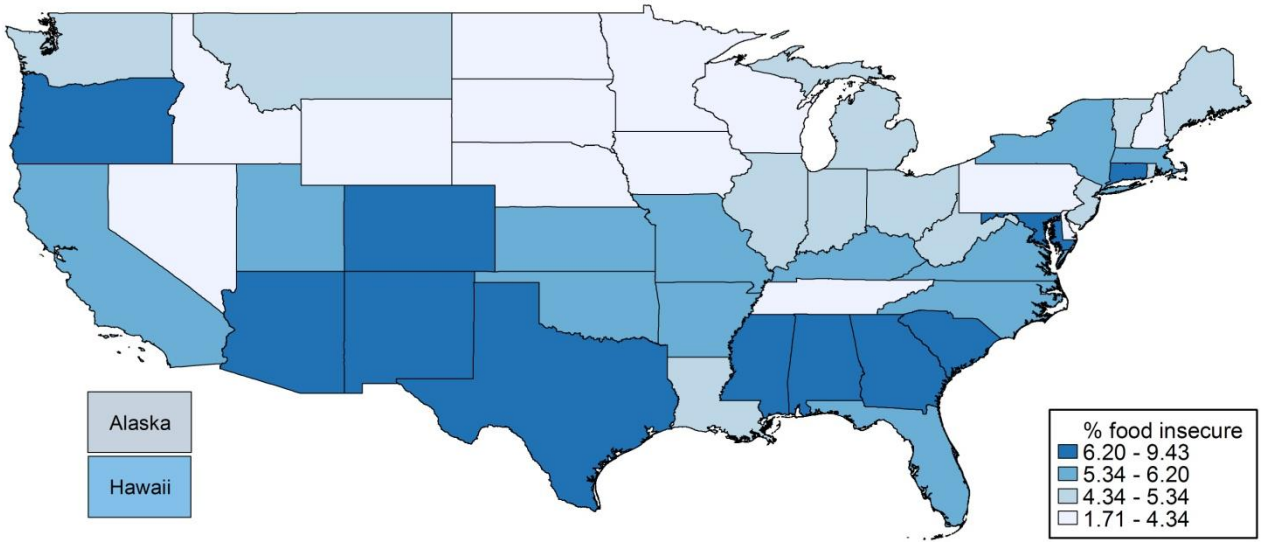


Figure 10c: State Very Low Food Security Rates for Adults Age 50 and Older, Under 300% FPL



In Tables 8a-8d [Appendix, pp. 79-86] we present food insecurity rates for the 50 major metropolitan areas with more than 1,000,000 residents, in Tables 9a-9d [Appendix, pp. 87-94] we present a comparable set of tables but restricted to those persons with incomes below twice the poverty line, and in Tables 10a-10d [Appendix, pp. 95-102] we present results for those with incomes below 300% of the poverty line. For the metro tables we pool data across 2004-2009 owing to changes in the definition of metro areas that make comparability difficult for years prior to 2004. As with the state tables, we present metro-based rates for persons age 50-59 (Tables 8a, 9a, 10a), age 40-49 (Tables 8b, 9b, 10b), ages 60 and older (Tables 8c, 9c, 10c), and ages 50 and older (Tables 8d, 9d, 10d).

III. Determinants of Food Insecurity: Comparing Middle Age Adults and Seniors

In this section we estimate how different factors such as race, income, family structure, and home ownership influence the probability of food insecurity and how these factors differ for those in their 40s and 50s to those who are older. Specifically we estimate the following models for food insecurity (FI):

$$FI_{ij} = X_{ij}\beta_j + u_{ij} \quad (1)$$

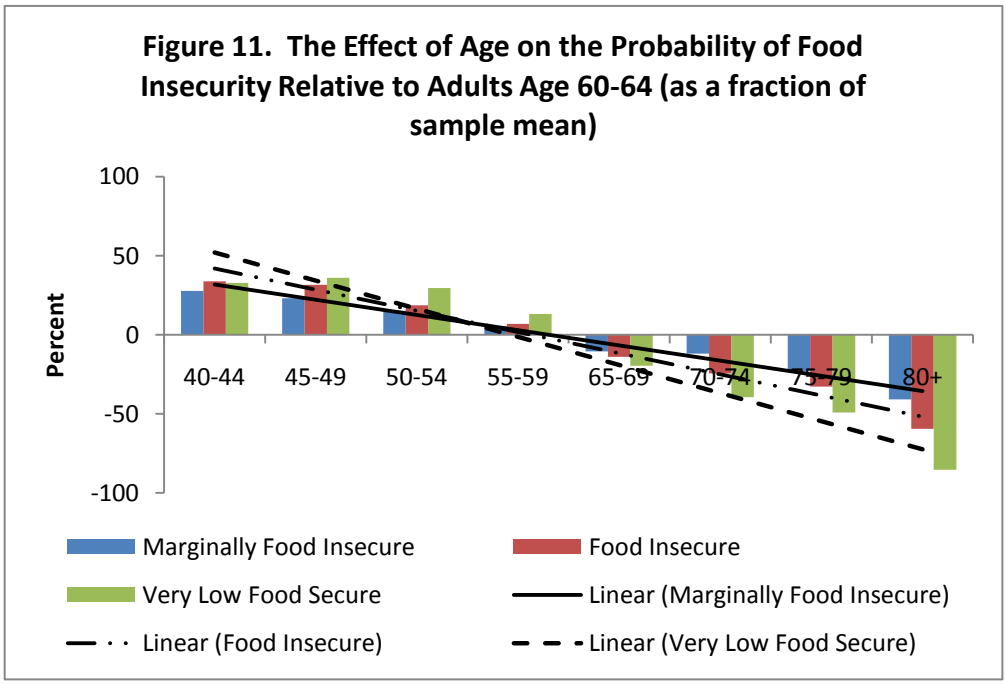
where *i* denotes an individual; *j* denotes age group (50-59; 40-49; 60+); ***X*** is a vector of the standard covariates available in the CPS (e.g., income, race, Hispanic ethnicity, gender, marital status (married, widowed, divorced/separated, never married), homeownership status, age); and *u* is an error term. Box 3 contains the list of confounding factors we control for and which group is omitted. The variable FI reflects whether or not the household is food insecure under the three categories of marginal food insecurity, food insecurity, and very low food security. We assume that the error term *u* is distributed standard normal and we apply probit maximum likelihood methods. We estimate the models in equation (1) for the whole sample of adults, as well as for the separate age groups and those with incomes below 200 percent of the poverty line.

In Table 11 [Appendix, pp. 103-104] we present estimates of the determinants of marginal food insecurity, food insecurity, and very low food security for the pooled sample of adults ages 40 and older. For each outcome we report the coefficients, which are the β in equation (1), as well as the so-called marginal effects, which represent the effect of a unit change in a variable on the probability of food insecurity. For example, the number 0.353 in the first column of marginal food insecurity implies that African Americans have a higher chance of being marginally food insecure relative to a white person, and the number 0.062 in the second column means that holding other factors fixed, an African American adult has a rate of marginal food insecurity 6.2 percentage points higher, all else equal, than a white person.

Across all three food security categories we see that households facing greater risk of food insecurity include non-whites, Hispanics, widowed, divorced or separated, those with incomes below the poverty line, the young, high school dropouts, renters, the disabled and unemployed, and those with grandchildren living in the household. These results are consistent with our previous work in Ziliak, et al. (2008) and Ziliak and Gundersen (2009) when we look just at those over age 60.

Box 3: Demographic Factors in Regression Models of Food Insecurity	
Race	White (omitted) African American Other
Ethnicity	Non-Hispanic (omitted) Hispanic
Education	High School Dropout (omitted) High School Graduate Some College College Degree or more
Marital Status	Never Married (omitted) Married Widowed Divorced/Separated
Age	60-64 (omitted) 65-69 70-74 75-79 80+
Income Level	Less than 50% of Poverty Line (omitted) 50-100% of Poverty Line 100-200% of Poverty Line > 200% of Poverty Line Missing
Housing Status	Renter (omitted) Homeowner
City Status	Live in Metro Area (omitted) Live in Non-Metro Area
Employment Status	Employed (omitted) Retired Unemployed Disabled
Gender	Male (omitted) Female
Region of Country	Midwest (omitted) South West Northeast
Family Structure	Lives with Others (omitted) Lives Alone

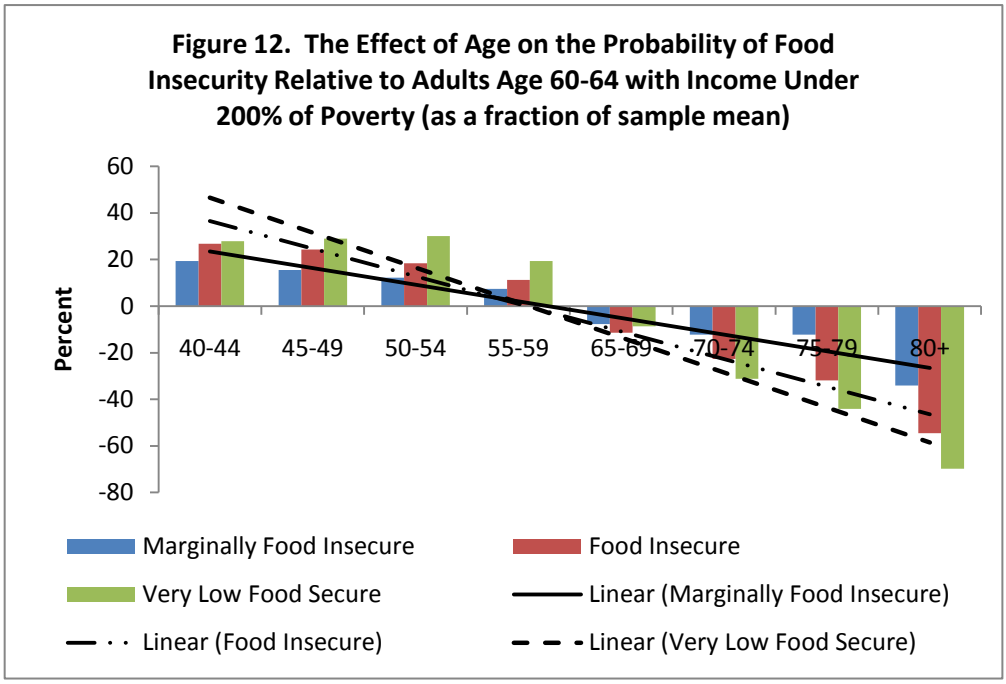
Because the focus here is on the effect of age on food insecurity, in Figure 11 we present the age gradient of each category of food insecurity relative to a 60-64 year old. Specifically we take the marginal effects on the age coefficients from each regression as a fraction of the average rate of food insecurity for a given category as reported in Table 1. For example, for a 40-44 year old in the marginal food insecurity regression we take the marginal effect of 0.042 and divide it by the average marginal food insecurity of 0.1515, and multiply by 100. So relative to the sample mean, a 40-44 year old has a risk of marginal food insecurity that is 28 percent *higher* than a 60-64 year old, holding constant other confounding factors (e.g. income, race, gender, education, etc..). Likewise a senior over age 80 has a risk of marginal food insecurity that is 41 percent *lower* than for a 60-64 year old. In the figure we superimpose a linear trend line for the age gradient in each food insecurity category. The trend lines indicate that the age gradient gets steeper as the severity of insecurity increases such that the age gradient is strongest for the category of very low food security. In words, older age is more protective of food insecurity as the severity increases.



In Tables 12a-12c [Appendix, pp. 105-110] we present a parallel set of estimates for the subsamples of 50-59, 40-49, and for 60+, respectively. Comparing the signs of the coefficients we note that with few exceptions the determinants are qualitatively similar between 50-59 year olds and those ages 40-49 and over age 60. Quantitatively, however, there are some distinctions and this is verified by the formal Wald test statistics that reject the null hypothesis that the coefficients for 50-59 year olds are statistically the same as those for the other age groups. For example, the Wald test statistic values are 148 and 186 with 33 degrees of freedom (p-value < 0.0001) for comparing the food insecurity coefficients of those in their 50s (Table 12a) to those in their 40s (Table 12b), and those in their 50s to 60+ (Table c). For example, because rates of

food insecurity are higher for 40-59 year olds relative to those over 60 then we know that the effect of a variable (in absolute value terms) relative to the subsample mean is larger for the 60+ group if the marginal effect is larger. So being African American or Hispanic has a larger negative effect on risk of food insecurity among 60+ than those in their 40s or 50s. Likewise, being disabled or having a grandchild living in the household is a greater risk factor for those over age 60.

In Table 13 [Appendix, pp. 111-112] we present the estimates of food insecurity but for the subsample of individuals with incomes below 200 percent of the poverty line. Table 11 is the pooled sample of low-income adults age 40 and older, and in comparing the estimates to those in Table 12 of the broader population we see that there are few qualitative differences in the economic and demographic determinants of food insecurity. Quantitatively there are some differences. For example, given the mean values of food insecurity in Table 1 we see that being African American is less of risk factor for food insecurity within the poor and near poor population, though it still remains a significant and unexplained risk, suggesting that even controlling for other factors low-income African Americans are at greater risk of food insecurity than similarly situated white persons. Figure 12 presents the effect of age on the probability of food insecurity relative to a 60-64 year old, but unlike Figure 11 we focus on the subsample of low-income persons. Again we find that the trend lines indicate that the age gradient gets steeper as the severity of insecurity increases such that the age gradient is strongest for the category of very low food security. However, that line is less steep for the low-income population suggesting that age is less protective of the risk of food insecurity for the poor and near poor than for the general population of adults over age 40.



Tables 14a-14c [Appendix, pp. 113-118] estimate the models for the subsamples of low-income 50-59 year olds, 40-49, and 60+, respectively. Again the Wald test statistics reject the null hypothesis that the coefficients are statistically the same, which means that even though the qualitative pattern of results are similar across Tables 14a and 14b the quantitative magnitudes are not similar. (The Wald test values are 58 and 138 with 31 degrees of freedom (p-value < 0.000) for food insecurity comparing coefficients from 40s-50s and 50s-60s, respectively.) Comparing the results here to those in Tables 12a-12c for the whole population of adults we find some differences. For low-income adults we find less evidence that marriage is protective against the risk of food insecurity, and likewise for advanced education and for home ownership. This suggests that low-income adults face multiple barriers to food security relative to the general population of adults over age 40.

IV. The Consequences of Food Insecurity for Older Adults

Food insecurity has been associated with a wide array of negative health outcomes both among the young and old. Among children research has shown that households suffering from food insecurity are more likely to have children who suffer from anemia (Eicher-Miller et al., 2009; Skaliky et al. 2006), have lower nutrient intakes (Casey et al., 2001; Cook et al., 2004), have greater cognitive problems (Ashiabi and O'Neal, 2008; Howard, 2011), have higher levels of aggression and anxiety (Kleinman et al., 1998; Slack and Yoo, 2005; Whitaker et al., 2006), have higher probabilities of being hospitalized (Cook et al., 2006), poorer general health (Cook et al., 2006; Gundersen and Kreider, 2009), greater probabilities of asthma (Kirpatrick et al., 2010), and more instances of oral health problems (Muirhead et al., 2009). Among adults under the age of 65, research has shown that households suffering from food insecurity are more likely to have adults who have lower nutrient intakes (Dixon et al., 2001; McIntyre et al., 2003; Tarasuk and Beaton, 1999), greater probabilities of mental health problems (Heflin et al., 2005), long term physical health problems (Tarasuk, 2001), higher levels of depression (Whitaker et al., 2006), diabetes (Nelson et al., 2001; Seligman et al., 2007), higher levels of chronic disease (Seligman et al., 2009), and lower scores on physical and mental health exams (Stuff et al., 2004).

Among Americans over age 60, work in Ziliak, et al. (2008) established that food insecurity has serious consequences for seniors, even controlling for other known health risks. We emphasized the following three findings all based on multivariate regressions where we controlled for other health risk factors. First, we found that seniors experiencing some form of food insecurity are substantively and statistically more likely to have lower intakes of energy and major vitamins. For example, across all the measures, the effect of being food insecure is over twice as large (and generally much larger) than a move in income from one-to-two times the poverty line. Second, food insecure seniors are significantly more likely to be in poor or fair health. In comparisons of very good or better health versus good or worse health and comparisons of good or better health versus fair or poor health, we find a strong effect of food insecurity. For sake of comparison, being food insecure is similar to not having graduated from high school. Third, seniors experiencing food insecurity are more likely to have limitations in activities of daily living (ADL). The effects are again strong – being food insecure is roughly equivalent to being 21 years older.

To better understand the impact of food insecurity on health outcomes, we structure the following section as follows. We first define the data we use and the methods employed in analyzing the data. We then turn to the three main questions we consider:

How do health outcomes of food insecure persons between the ages of 50 and 59 differ from food secure persons in the same age group?

How do differences in health outcomes by food insecurity status between the ages of 50 and 59 differ from those who are younger or older?

Controlling for other confounding factors such as race, income, and education how does the impact of being food insecure differ for those who are food secure?

A. Data and Methods

For the health outcome analyses, we use data from the 1999-2008 NHANES. The NHANES, conducted by the National Center for Health Statistics, Centers for Disease Control (NCHS/CDC), is a program of studies designed to assess the health and nutritional status of adults and children in the United States through interviews and focused physical examinations. The survey now examines a nationally representative sample of about 5,000 persons each year, about half of whom are adults. Of these, in any year, approximately 1,000 persons per year will be in the age ranges being considered. The interview includes demographic, socioeconomic, dietary, and health-related questions and health assessments consisting of medical and dental examinations, physiological measurements and laboratory tests. Vulnerable groups, including persons over 60, are oversampled in the NHANES to produce more reliable statistics. We use weights constructed by NHANES that are applicable for samples pooled across years.

For the analyses here, we use data from the following subset of NHANES modules: demographics, food security, occupation, health insurance, body measures, diabetes, hospital utilization, physical functioning, total nutrients, and current health. Of particular importance to the analyses here is, of course, the presence of the full CFSM on the food security module.

We use the following sets of variables. For nutrient intakes we consider variables measuring energy intake, protein, vitamin A, vitamin C, thiamin, riboflavin, vitamin B6, calcium, phosphorous, magnesium, and iron. For broader health outcomes, we consider, among other variables, diabetes, self-reports of general health (excellent, very good, good, fair, or poor), depression, diabetes, and ADL limitations.

When we analyze the impact of food insecurity on health outcomes (H) using data from the NHANES, our models take the following form:

$$H_{ij} = f(FI_i, X_i) \qquad (2)$$

where j denotes a health outcome (e.g., energy intake, ADL limitations); FI=1 if a person is in a food insecure household, 0 otherwise; and X is a set of demographic variables. We estimate (2) using standard linear regression models when the health outcome is continuous and probit models when the health outcome is binary.

B. Differences in Health Outcomes by Food Insecurity Status

In Table 15 [Appendix, pp. 119] we display the mean values of our key nutrition and health outcomes broken down by food insecurity status for those between the ages of 50 and 59. (In what follows, unless otherwise stated, in this section we are looking at persons between these ages.) In the work above, we considered breakdowns of food insecurity status by the categories of marginally food insecure, food insecure, and very low food secure. Here we focus exclusively on the effect of food insecurity on health outcomes. The principal reason is that the smaller sample size in the NHANES – in any year, it is about one-tenth the size of the CPS - precludes there being enough very low food secure persons for comparisons of health outcomes.

Intakes are lower for food insecure persons than food secure persons for all of the eleven nutrients. And, for seven of the ten, the differences are statistically significant. (The only ones for which the differences are not statistically significant are for energy intake, protein, vitamin C, and riboflavin.) The differences between food insecure and food secure persons are not all that large, though, even when statistically significant.

In contrast to nutrient intakes, the differences between food insecure and food secure persons with respect to broader measures of health outcomes are quite stark. As seen in Table 15, in comparison to food secure adults, food insecure adults are almost twice as likely to be diabetic (19% versus 2%), are far less likely to be in excellent or very good health (17% versus 44%), are over five times more likely to suffer from depression (16% versus 3%), and over twice as likely to have at least one ADL limitation (52% versus 21%).

As covered in the previous section, food insecurity is more likely to occur in households with incomes below 200% of the poverty line. In addition, the positive relationship between income and good health has been oft-established in the literature (e.g., Deaton, 2002). As a consequence, at least some of the differences discussed above could be due to income differences rather than food insecurity differences. In Table 16 [Appendix, pp. 120] we therefore reconsider the results in Table 15 when we restrict the sample to those below 200% of the poverty line.

Once we restrict the sample to those below 200% of the poverty line, there are no longer differences in nutrient intakes between food insecure and food secure persons. While in all cases but one food insecure persons have lower nutrient intakes, the differences are not statistically significant. A similar story holds for diabetes – the differences are no longer statistically significant.

In looking at general health outcomes, the differences do remain statistically significant and large (albeit not as large as when the sample is not restricted by income). For example, 16% of food insecure persons have excellent or very good health versus 24% of food secure persons. A similar situation holds for depression (18% of food insecure persons suffer from depression in comparison to 8% of food secure persons) and for ADL limitations (57% versus 40%).

Persons living in households with incomes below 200% of the poverty line is one demographic group worth examining as distinct from the full population. In Tables 12 through 27 we present the results for demographic groups in the NHANES for which there were at least 500 observations. The groups were selected on the basis of our results in the CPS analyses that showed that certain subpopulations of seniors where at greater risk of food insecurity, e.g. by race, ethnicity, and education. Restricting attention to groups with at least 500 sample observations minimizes the potential influence of survey measurement error. The structure of each table is the same as in Tables 15 and 16. In what follows, we concentrate on cases where there are statistically significant differences between food insecure and food secure persons.

With respect to marital status, married food secure and food insecure persons have significantly different nutrient intakes for one of the measures, calcium (Table 17) [Appendix, pp. 121]. Married food insecure persons have substantially higher rates of diabetes (24% to 9%), lower rates of being in excellent or very good health (19% to 45%), higher rates of depression (9% to 2%), and are more likely to have at least one ADL limitation (46% to 20%). In Table 18 [Appendix, pp. 122], the results for persons who are not married or widowed are displayed. Distinct from those who are married, nutrient intakes are statistically significantly lower for vitamin A, vitamin C, thiamin, and iron for food insecure persons but food insecure persons do not have higher rates of diabetes.

Turning to income, for those with incomes below the poverty line there are few differences between food secure and food insecure persons. The differences are only present with respect to general health (e.g., 9% of food insecure persons have excellent or very good health versus 27% of food secure persons) and ADL limitations (65% versus 47%) (Table 19). When we restrict the sample to those with incomes between 100 and 200% of the poverty line, there is a similar lack of differences between food insecure and food secure persons. The only two differences are with respect to depression (14% versus 5%) and at least one ADL limitation (49% versus 36%). [Appendix, pp. 123-124]

As opposed to when we look at those with incomes below the poverty line and between 100 and 200% of the poverty line, there are more differences in health by food insecurity status for those above 200% of the poverty line. This is seen in Table 21 [Appendix, pp. 125]. For protein, vitamin A, vitamin C, thiamin, riboflavin, and calcium, food insecure persons have lower intakes than food secure persons in the same age range. And, the gaps are large for some of the nutrients (e.g., calcium). There are also worse health outcomes for diabetes (albeit not statistically significant), general health, depression, and ADL limitations.

In Tables 22 and 23 [Appendix pp. 126-127], we consider the relationship between food insecurity status and health outcomes for females and for males separately. Once things are broken down by gender, many of the differences in nutrient status found in Table 15 are no longer present. For women, vitamin A, thiamin, magnesium, and iron are statistically significantly lower for food insecure persons and, for men, calcium, magnesium, and iron are lower. Like for the full population, though, the differences for diabetes, general health, depression, and ADL limitations by food insecurity status are present for both women and men. The numerical differences are relatively similar for diabetes and general health but the difference is greater for women for depression (15 percentage points versus 10 percentage points) while the opposite holds for ADL limitations (28 percentage points versus 33 percentage points).

Turning to breakdowns by race/ethnicity, we consider African-Americans (Table 24), Hispanics (Table 25), and whites (Table 26) [Appendix, pp. 128-130]. With the exception of vitamin C for African-Americans, riboflavin for Hispanics, and vitamin C, magnesium, and iron for whites, there are no statistically significant differences by food insecurity with respect to nutrient intakes. For diabetes, there are differences for whites but not for African-Americans, or Hispanics. In the main, there are differences in general health outcomes by food insecurity status for all three groups. For African-Americans and whites there are differences for depression and ADL limitations but not for Hispanics.

Finally, we break things down by whether or not someone graduated from high school. As seen in Table 27 [Appendix, pp. 131], high school graduates who are food insecure have similar nutrient intakes (with the exception of vitamin A and iron) as those who are food secure. Over each of the other health outcomes, food insecure persons have statistically significant worse health outcomes. For those who didn't graduate from high school (Table 28) [Appendix, pp. 132], there are not as many differences between food insecure and food secure persons. Only for thiamin, iron, being in excellent health, being in good, very good, or excellent health, and having at least one ADL limitation are there differences.

C. Comparing Health Outcomes across Older Adult Age Groups

The above analyses allow us to see if there are differences by food insecurity with respect to relevant health outcomes for those between the ages of 50 and 59. We now consider how these differences are similar to those older (above the age of 60) and those slightly younger (between the ages of 40 and 49). This is further broken down for the full population within the age categories and for the under 200% of the income category. Before turning to these comparisons, we note that comparisons of the health status of food insecure or food secure persons by age are likely to show that older food insecure (food secure) persons will have lower nutrient intakes and higher levels of worse health outcomes. Our comparisons, therefore, are with respect to differences by food insecurity status within any age group.

As seen in a comparison of Table 15 and Table 29 [Appendix, pp. 133], for those between the ages of 40 and 49, there are slightly fewer differences in food intakes by food insecurity status than for those between 50 and 59. For the younger group, there are only differences for thiamin, riboflavin, magnesium, and iron while for the older group, there are differences in six nutrients. Like for the older group, in the younger group, food insecure persons have statistically significantly worse health outcomes with respect to diabetes, general health outcomes, depression, and ADL limitations. The percentage point differences between food insecure and food secure persons are similar for general health and depression but they are larger for the 50-59 age group for diabetes (9 points versus 4 points) and for ADL limitations (31 points versus 24 points), which is consistent with the CPS analysis pointing to higher rates of disability among 50-59 year olds.

In contrast to both the 40-49 age group and the 50-59 age group, there are marked differences between food insecure and food secure persons in the over 60 group (Table 30) [Appendix, pp. 134]. For each of the nutrients, food insecure persons have statistically significantly lower intakes. And, these differences are quite large. For example, vitamin C intakes are almost 20% lower for food insecure 60-69 year olds in comparison to food secure 60-69 year olds. Similar to the results for the younger age groups, the health outcomes for diabetes, general health, depression, and ADL limitations are worse for food insecure persons over the age of 60.

As we did above, we now consider comparisons when we restrict the sample to those below 200% of the poverty line. As seen in Table 31 [Appendix, pp. 135], like those between 50 and 59 with incomes below 200% of the poverty line (Table 16), there are no statistically significant differences between food insecure and food secure persons between the ages of 40 and 49. Similarly, with respect to the other health outcomes, food insecure persons experience worse outcomes in comparison to food secure persons for both age groups with the exception of diabetes. The percentage point differences are similarly albeit slightly larger for ADL limitations in the older group (17 points versus 6 points). For those over age 60, the statistically significant difference between food insecure and food secure persons remains for some but not all of the nutrients (Table 32) [Appendix, pp. 136]. When we look at other health outcomes, the differences between food insecure and food secure persons in the age 60 and over group are similar to the other groups. One difference, though, is that unlike for the younger age groups, there is a statistically significant difference in the rates of diabetes between food insecure and food secure persons and the difference is large – 28% versus 19%.

D. Food Insecurity and the Determinants of Health Outcomes

We now turn to our third question by estimating equation (2) described above. In Tables 33 and 34 [Appendix, pp. 137-138] we display the results for the nutrient intakes. As seen there, after controlling for other factors, the association of food insecurity with health outcomes is statistically insignificant for each of the nutrients. The association of other variables with nutrient intakes present no surprises. For example, higher incomes are associated with higher nutrient intakes, controlling for other variables.

In contrast to nutrient intakes where food insecurity has a statistically insignificant effect, food insecurity has a statistically significant association with health outcomes as seen in Table 35 [Appendix, pp. 139]. The association is negative for being in very good or excellent health or for being in good, very good, or excellent health and is positive for depression and ADL limitations. The magnitude of the effect of food insecurity is very large. For example, the effect of food insecurity on being in good, very good, or excellent health is approximately equivalent to having $15,000 more in income per year. Or, to cite another example, the effect of food insecurity on the probability of having at least one ADL limitation is approximately equivalent to being 13 years older. The effect of the other variables in the model again offer no surprises. For example, for most health outcomes, those with more education have better outcomes and in the cases where this doesn't hold, the effect is statistically insignificant.

In Tables 36 through 38 [Appendix, pp. 140-142], we present results when the sample is under 200% of the poverty line. For nutrient intakes, as for the full population, food insecurity does not have a statistically significant effect on any of the nutrient intakes. For the other health outcomes (Table 38), the effect of food insecurity is statistically significant and negative for being in excellent or very good health and positive for depression and ADL limitations. Like for the full population, the effect of food insecurity on ADL limitations is especially large. Here, the effect of food insecurity on the probability of having at least one ADL limitation is approximately equivalent to being 13 years older.

To compare how the association of food insecurity with health and nutrient outcomes, controlling for other factors, may differ for those from ages 50 to 59 with younger and older age groups, we now consider estimations of equation (2) for those between 40 and 49 and those over age 60. These results are for all incomes; below we consider for those under 200% of the poverty line. Like for the older age group, food insecurity has a statistically insignificant effect on each of the nutrient intakes (Tables 39 and 40) [Appendix, pp. 143-144]. For the other health outcomes, the results are also similar between the two age groups with food insecure persons faring worse over each of the health outcomes except for diabetes and excellent health (where they are statistically insignificant) (Table 41) [Appendix, pp. 145]. In addition, the magnitudes of the impacts are quite similar.

Turning to the older age group, the effect of food insecurity on nutrient intakes is statistically significant and negative for each of the nutrients except for vitamin A and calcium (Tables 42 and 43) [Appendix, pp. 146-147]. This is distinct from the other age groups where the effect of food insecurity was statistically insignificant. Like for the other age groups, food insecurity leads to statistically significant worse outcomes for all the health outcomes except for diabetes and excellent health (Table 44) [Appendix, pp. 148].

We now turn to results for those with incomes under 200% of the poverty line. As seen in Tables 45 and 46 [Appendix, pp. 149-150], like for those between the ages of 50 and 59, food insecurity has a statistically insignificant effect on each of the nutrient intakes for those between the ages of 40 and 49. For the other health outcomes (Table 47) [Appendix, pp. 151], the effect of food insecurity is statistically significant and negative for being in excellent, very good, or good health and positive for depression and ADL limitations. This is similar to the 50-59 age group except for being in excellent or very good health where the effect is statistically significant and negative for the older age group.

Like the results for the full population, older food insecure persons in households with incomes under 200% of the poverty line, controlling for other factors, have lower nutrient intakes than food secure persons (Tables 48 and 49) [Appendix, pp. 152-153]. This holds for the following nutrients: energy, protein, thiamin, vitamin B6, phosphorous, magnesium, and iron. Recall that for this income group for those under 60, the effects of food insecurity on nutrient intakes were statistically insignificant. For the other health outcomes, food insecurity has a statistically significant and negative association on diabetes, being in excellent or very good health, and being in excellent, very good, or good health and a positive association with ADL limitations. The main difference with the other age groups in this income category is that there is a statistically significant association with diabetes and a statistically insignificant association with depression. [Appendix, pp. 154]

V. Conclusion

Our results show that that has been a sharp increase in food insecurity between 2007 and 2009 that cuts across age, race, ethnicity, and education. The increases were greatest among those adults ages 40-59 compared to those age 60 and older. We also find that among 50-59 year olds that disability is a significant correlate of food insecurity, and as verified in our analyses of health outcomes in the NHANES, food insecure adults are much more likely to report problems with depression and ADLs, even controlling for confounding factors such as income, education, and race.

Our prior research in Ziliak, et al. (2008) and Ziliak and Gundersen (2009) showed that the risk of food insecurity declined with age among the 60 and older population of seniors. The analysis here indicates that rates of food insecurity decline with age across the population of 40 to 90 year olds. This suggests that policymakers and NGOs face a challenge in designing anti-hunger policy because such a wide swath of the population is at risk of hunger. However, certain demographic groups are especially vulnerable and in need to assistance. This includes persons of color, the poor and near poor, the disabled, those residing in the South, and those raising grandchildren.

A key reason why there is concern with food insecurity among older Americans is due to its association with diminished nutrient intakes and negative health outcomes. Consistent with the results in Ziliak, et al. (2008), using data from the 1999 through 2008 NHANES, we find that food insecure persons between the ages of 50 and 59 have lower nutrient intakes and worse health outcomes than food secure persons in the same age range. This holds, in general, across all the demographic categories we considered. One contrast with older seniors, though, is that the effect of food insecurity, controlling for other factors, on nutrient intakes is statistically insignificant but the association is negative and significant for older seniors. Nevertheless, the worse health outcomes associated with food insecurity for older seniors also holds for those in the 50 to 59 age group, even controlling for other factors. As a consequence, policymakers, program administrators, and non-profit organizations may wish to continue to concentrate their efforts on addressing the negative health outcomes among the food insecure in this group.

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Appendix

Table 1. Selected Characteristics of Persons Age 40 and Older, 2001-2009

	All	Below 200% of Poverty Line
Income Categories		
Below 50% of the Poverty Line	2.12	9.95
Between 50% and 100% of the Poverty Line	5.64	26.44
Between 100% and 200% of the Poverty Line	13.56	63.60
Above 200% of the Poverty Line	55.21	
Missing Income	23.46	
Racial Categories		
White	83.89	77.06
African American	10.73	17.18
Other	5.39	5.76
Hispanic Ethnicity	9.06	17.39
Marital Status		
Married	65.64	47.86
Widowed	10.48	18.13
Divorced or Separated	15.25	21.93
Never Married	8.63	12.07
Homeowner	81.71	62.85
Geographic Location		
Non-Metro	18.86	25.35
Northeast	19.47	16.72
Midwest	22.70	21.10
South	35.99	40.88
West	21.85	21.30
Age		
40 to 44	16.93	16.37
45 to 49	16.92	14.49
50 to 54	15.35	12.05
55 to 59	13.11	10.09
60 to 64	10.31	9.39
65 to 69	8.02	9.30
70 to 74	6.52	8.67
75 to 79	5.72	8.49
80 and older	7.12	11.15

Table 1 (continued). Selected Characteristics of Persons Age 40 and Older, 2001-2009

	All	Below 200% of Poverty Line
Employment Status		
Employed	57.29	35.05
Unemployed	2.65	4.66
Retired	27.01	34.87
Disabled	13.03	25.42
Education Level		
Less Than High School	14.94	33.96
High School Diploma	32.39	38.13
Some College	25.37	19.66
College Degree	27.30	8.24
SNAP (Food Stamp) Recipient	4.20	16.02
Grandchild or Parent Present		
No Grandchild or Parent	95.85	92.22
Grandchild and Parent	3.02	5.48
Grandchild Only	1.13	2.30
Female	52.96	57.35
Living Alone	17.93	27.38
Food Security Status		
Marginal Food Insecurity	15.15	39.32
Food Insecurity	8.57	23.83
Very Low Food Secure	3.05	9.31

Source: Authors' calculations from the 2001-2009 December Current Population Survey. There are 236,997 observations overall, and 52,580 below 200% of poverty.

Table 2a. Food Insecurity Rates for Persons Age 50-59, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	8.12	10.01	12.51
Between 50% and 100% of the Poverty Line	17.14	19.91	23.40
Between 100% and 200% of the Poverty Line	26.80	27.84	28.24
Above 200% of the Poverty Line	31.60	26.42	22.98
Missing Income	16.34	15.82	12.87
Racial Categories			
White	71.81	69.64	70.31
African American	22.41	24.20	23.90
Other	5.79	6.16	5.79
Hispanic Ethnicity	17.24	17.45	14.42
Marital Status			
Married	49.46	45.16	39.00
Widowed	6.66	7.62	8.55
Divorced or Separated	30.67	33.29	37.67
Never Married	13.21	13.93	14.78
Homeowner	58.92	53.62	48.42
Geographic Location			
Non-Metro	19.81	19.28	19.42
Northeast	17.13	16.49	17.56
Midwest	20.51	20.87	21.54
South	38.78	38.68	37.69
West	23.58	23.96	23.20
Employment Status			
Employed	51.92	46.33	41.97
Unemployed	7.79	8.88	10.24
Retired	4.57	4.18	3.50
Disabled	35.72	40.61	44.29
Education Level			
Less Than High School	26.77	29.24	27.51
High School Diploma	34.41	32.43	30.53
Some College	26.14	26.64	30.25
College Degree	12.68	11.68	11.71
SNAP (Food Stamp) Recipient	21.48	26.82	31.99
Grandchild or Parent Present			
No Grandchild or Parent	90.14	90.02	91.70
Grandchild and Parent	7.13	7.17	5.75
Grandchild Only	2.73	2.81	2.55
Female	55.70	56.68	57.79
Living Alone	22.06	25.17	31.97

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 2b. Food Insecurity Rates for Persons Age 40-49, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	8.89	11.52	14.43
Between 50% and 100% of the Poverty Line	15.86	18.14	21.70
Between 100% and 200% of the Poverty Line	27.18	26.85	25.85
Above 200% of the Poverty Line	32.45	28.04	23.81
Missing Income	15.62	15.45	14.20
Racial Categories			
White	72.98	72.02	69.99
African American	21.54	22.29	24.58
Other	5.49	5.68	5.42
Hispanic Ethnicity	20.72	21.25	16.59
Marital Status			
Married	53.58	50.35	40.92
Widowed	2.13	2.28	2.64
Divorced or Separated	26.35	28.89	34.04
Never Married	17.93	18.47	22.40
Homeowner	55.64	51.07	44.33
Geographic Location			
Non-Metro	18.93	19.19	16.87
Northeast	17.14	16.60	17.26
Midwest	20.77	20.60	22.08
South	38.88	39.81	39.13
West	23.21	22.98	21.53
Employment Status			
Employed	65.51	60.74	53.08
Unemployed	8.62	9.69	11.74
Retired	0.22	0.21	0.24
Disabled	25.65	29.36	34.93
Education Level			
Less Than High School	23.29	25.60	23.77
High School Diploma	38.04	37.86	39.05
Some College	26.84	26.70	28.32
College Degree	11.83	9.84	8.86
SNAP (Food Stamp) Recipient	19.99	24.74	32.81
Grandchild or Parent Present			
No Grandchild or Parent	93.46	93.23	94.39
Grandchild and Parent	5.65	5.76	4.82
Grandchild Only	0.89	1.01	0.79
Female	53.98	55.18	56.62
Living Alone	12.33	13.57	20.83

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 2c. Food Insecurity Rates for Persons Age 60 and Older, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	6.02	7.68	8.89
Between 50% and 100% of the Poverty Line	23.65	26.49	32.09
Between 100% and 200% of the Poverty Line	33.47	31.42	30.86
Above 200% of the Poverty Line	18.59	16.04	12.81
Missing Income	18.27	18.36	15.35
Racial Categories			
White	72.64	69.18	70.00
African American	21.40	24.78	24.35
Other	5.97	6.04	5.65
Hispanic Ethnicity	14.95	16.26	14.06
Marital Status			
Married	43.65	40.34	33.57
Widowed	30.00	29.74	29.60
Divorced or Separated	20.13	23.26	29.86
Never Married	6.21	6.66	6.96
Homeowner	65.43	60.39	53.76
Geographic Location			
Non-Metro	22.12	21.57	19.30
Northeast	17.58	16.57	16.17
Midwest	18.95	18.27	17.05
South	43.18	45.31	46.69
West	20.30	19.84	20.10
Employment Status			
Employed	16.03	15.43	13.17
Unemployed	2.56	3.11	4.39
Retired	56.83	52.68	49.62
Disabled	24.58	28.77	32.82
Education Level			
Less Than High School	43.51	45.67	45.47
High School Diploma	32.38	30.81	28.91
Some College	16.46	16.28	18.42
College Degree	7.64	7.25	7.21
SNAP (Food Stamp) Recipient	18.55	23.17	28.50
Grandchild or Parent Present			
No Grandchild or Parent	89.78	88.41	90.70
Grandchild and Parent	6.13	6.88	6.37
Grandchild Only	4.09	4.71	2.93
Female	60.90	59.69	59.25
Living Alone	33.88	35.36	42.63

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 2d. Food Insecurity Rates for Americans Age 50 & older in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	7.04	8.89	10.92
Between 50% and 100% of the Poverty Line	20.49	23.08	27.23
Between 100% and 200% of the Poverty Line	30.24	29.56	29.39
Above 200% of the Poverty Line	24.89	21.43	18.50
Missing Income	17.34	17.04	13.97
Racial Categories			
White	72.24	69.42	70.17
African American	21.89	24.48	24.10
Other	5.88	6.10	5.73
Hispanic Ethnicity	16.06	16.88	14.27
Marital Status			
Married	46.47	42.84	36.61
Widowed	18.69	18.26	17.83
Divorced or Separated	25.24	28.46	34.23
Never Married	9.60	10.43	11.34
Homeowner	62.28	56.88	50.77
Geographic Location			
Non-Metro	21.00	20.38	19.37
Northeast	17.36	16.53	16.95
Midwest	19.71	19.62	19.56
South	41.05	41.87	41.65
West	21.89	21.98	21.83
Employment Status			
Employed	33.42	31.46	29.28
Unemployed	5.09	6.11	7.66
Retired	31.50	27.52	23.82
Disabled	29.98	34.91	39.23
Education Level			
Less Than High School	35.40	37.15	35.42
High School Diploma	33.36	31.65	29.82
Some College	21.15	21.66	25.04
College Degree	10.09	9.55	9.73
SNAP (Food Stamp) Recipient	19.97	25.06	30.45
Grandchild or Parent Present			
No Grandchild or Parent	89.95	89.25	91.26
Grandchild and Parent	6.62	7.03	6.03
Grandchild Only	3.43	3.72	2.72
Female	58.38	58.13	58.43
Living Alone	28.16	30.07	36.67

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 3a. Food Insecurity Rates for Persons Age 50-59 and Income Below 200 % of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	15.60	17.33	19.50
Between 50% and 100% of the Poverty Line	32.92	34.47	36.48
Between 100% and 200% of the Poverty Line	51.48	48.20	44.02
Racial Categories			
White	69.51	68.26	68.95
African American	24.54	25.58	26.19
Other	5.95	6.16	4.86
Hispanic Ethnicity	20.59	19.41	16.49
Marital Status			
Married	42.09	39.30	33.79
Widowed	8.58	9.49	9.53
Divorced or Separated	33.59	35.50	39.73
Never Married	15.74	15.71	16.95
Homeowner	48.93	45.31	41.96
Geographic Location			
Non-Metro	21.88	21.58	21.11
Northeast	15.43	14.60	15.27
Midwest	19.48	20.33	21.28
South	42.50	42.13	42.08
West	22.58	22.93	21.37
Employment Status			
Employed	38.81	35.55	31.64
Unemployed	8.60	9.56	10.71
Retired	4.75	4.42	3.87
Disabled	47.84	50.46	53.79
Education Level			
Less Than High School	34.55	34.75	31.77
High School Diploma	34.89	33.23	32.03
Some College	22.60	24.02	28.31
College Degree	7.96	8.00	7.90
SNAP (Food Stamp) Recipient	32.90	37.15	40.90
Grandchild or Parent Present			
No Grandchild or Parent	87.93	88.00	90.61
Grandchild and Parent	8.49	8.11	5.85
Grandchild Only	3.59	3.89	3.54
Female	57.14	58.24	58.70
Living Alone	25.51	27.72	34.68

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 3b. Food Insecurity Rates for Persons Age 40-49 and with Income Below 200 % of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	17.12	20.39	23.28
Between 50% and 100% of the Poverty Line	30.54	32.10	35.01
Between 100% and 200% of the Poverty Line	52.34	47.51	41.71
Racial Categories			
White	71.63	70.80	69.03
African American	22.84	23.77	25.44
Other	5.53	5.43	5.53
Hispanic Ethnicity	26.10	25.57	18.89
Marital Status			
Married	47.69	45.49	36.66
Widowed	2.63	2.68	3.27
Divorced or Separated	29.18	31.17	35.87
Never Married	20.50	20.65	24.20
Homeowner	45.18	41.78	36.22
Geographic Location			
Non-Metro	21.37	21.87	19.61
Northeast	15.49	15.26	16.16
Midwest	19.52	19.91	23.35
South	41.30	41.41	39.14
West	23.69	23.42	21.35
Employment Status			
Employed	55.01	51.11	44.44
Unemployed	10.53	11.15	12.32
Retired	0.16	0.18	0.01
Disabled	34.30	37.57	43.24
Education Level			
Less Than High School	30.75	32.03	28.99
High School Diploma	39.34	38.62	40.63
Some College	23.03	22.88	24.73
College Degree	6.88	6.47	5.64
SNAP (Food Stamp) Recipient	30.66	34.86	42.64
Grandchild or Parent Present			
No Grandchild or Parent	92.03	92.06	93.94
Grandchild and Parent	6.78	6.56	4.85
Grandchild Only	1.19	1.38	1.21
Female	55.26	56.62	58.46
Living Alone	12.94	14.33	22.34

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 3c. Food Insecurity Rates for Persons Age 60 and Older and with Income Below 200 % of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	9.54	11.72	12.38
Between 50% and 100% of the Poverty Line	37.45	40.38	44.66
Between 100% and 200% of the Poverty Line	53.01	47.90	42.95
Racial Categories			
White	72.42	68.64	68.45
African American	22.21	26.05	26.06
Other	5.37	5.31	5.49
Hispanic Ethnicity	16.36	17.07	13.82
Marital Status			
Married	40.51	38.69	33.45
Widowed	32.12	30.69	29.40
Divorced or Separated	20.74	23.74	29.84
Never Married	6.62	6.88	7.31
Homeowner	59.86	54.61	49.50
Geographic Location			
Non-Metro	25.09	24.75	21.99
Northeast	16.21	15.58	14.32
Midwest	18.35	16.82	15.72
South	45.35	48.03	49.46
West	20.09	19.57	20.50
Employment Status			
Employed	11.11	10.62	9.33
Unemployed	2.41	2.84	3.66
Retired	58.68	53.83	50.45
Disabled	27.81	32.70	36.55
Education Level			
Less Than High School	50.58	51.85	51.11
High School Diploma	30.42	28.62	27.41
Some College	13.90	14.08	16.02
College Degree	5.10	5.45	5.46
SNAP (Food Stamp) Recipient	24.19	28.77	32.12
Grandchild or Parent Present			
No Grandchild or Parent	89.19	87.43	89.76
Grandchild and Parent	6.41	7.31	6.75
Grandchild Only	4.40	5.26	3.49
Female	61.63	60.28	59.11
Living Alone	38.33	39.18	45.17

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 3d. Food Insecurity Rates for Americans Age 50+ & Below 200 % of the Poverty Line in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	12.19	14.45	16.16
Between 50% and 100% of the Poverty Line	35.47	37.50	40.32
Between 100% and 200% of the Poverty Line	52.34	48.05	43.52
Racial Categories			
White	71.15	68.46	68.72
African American	23.23	25.82	26.13
Other	5.62	5.72	5.16
Hispanic Ethnicity	18.21	18.21	15.24
Marital Status			
Married	41.20	38.99	33.63
Widowed	21.84	20.36	18.84
Divorced or Separated	26.35	29.47	35.10
Never Married	10.60	11.18	12.43
Homeowner	55.09	50.08	45.49
Geographic Location			
Non-Metro	23.69	23.20	21.52
Northeast	15.87	15.10	14.82
Midwest	18.84	18.53	18.67
South	44.11	45.16	45.54
West	21.18	21.21	20.96
Employment Status			
Employed	23.21	22.77	21.19
Unemployed	5.11	6.11	7.40
Retired	35.12	29.77	25.70
Disabled	36.56	41.35	45.71
Education Level			
Less Than High School	43.58	43.52	40.83
High School Diploma	32.38	30.86	29.86
Some College	17.70	18.92	22.55
College Degree	6.34	6.69	6.76
SNAP (Food Stamp) Recipient	28.00	32.85	36.78
Grandchild or Parent Present			
No Grandchild or Parent	88.64	87.71	90.21
Grandchild and Parent	7.32	7.70	6.28
Grandchild Only	4.05	4.59	3.51
Female	59.67	59.28	58.89
Living Alone	32.73	33.60	39.60

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 4a. Food Insecurity Rates for Americans Age 50-59 & Below 300 % of the Poverty Line in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	12.33	14.10	16.64
Between 50% and 100% of the Poverty Line	26.03	28.05	31.15
Between 100% and 200% of the Poverty Line	40.71	39.22	37.58
Between 200% and 300% of the Poverty Line	20.93	18.62	14.63
Racial Categories			
White	70.70	69.18	69.91
African American	23.58	24.91	25.11
Other	5.72	5.91	4.99
Hispanic Ethnicity	18.87	17.99	14.88
Marital Status			
Married	45.44	42.15	36.31
Widowed	7.92	8.82	9.13
Divorced or Separated	32.45	34.47	39.06
Never Married	14.19	14.56	15.50
Homeowner	53.09	48.87	44.75
Geographic Location			
Non-Metro	21.81	21.29	20.84
Northeast	15.65	15.03	15.60
Midwest	20.21	21.19	21.64
South	41.02	40.48	41.08
West	23.12	23.30	21.68
Employment Status			
Employed	44.56	40.95	36.68
Unemployed	8.52	9.50	10.57
Retired	4.84	4.33	3.57
Disabled	42.09	45.22	49.17
Education Level			
Less Than High School	31.05	31.96	29.44
High School Diploma	35.08	33.35	31.88
Some College	24.88	25.73	29.35
College Degree	8.98	8.96	9.33
SNAP (Food Stamp) Recipient	27.36	31.83	36.25
Grandchild or Parent Present			
No Grandchild or Parent	88.62	88.83	91.11
Grandchild and Parent	7.99	7.64	5.73
Grandchild Only	3.39	3.53	3.16
Female	56.90	57.89	58.69
Living Alone	24.05	26.46	33.95

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 4b. Food Insecurity Rates for Americans Age 40-49 & Below 300 % of the Poverty Line in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	13.20	16.23	19.46
Between 50% and 100% of the Poverty Line	23.54	25.55	29.27
Between 100% and 200% of the Poverty Line	40.35	37.82	34.87
Between 200% and 300% of the Poverty Line	22.90	20.40	16.40
Racial Categories			
White	72.97	71.76	70.26
African American	21.55	22.70	24.51
Other	5.48	5.54	5.22
Hispanic Ethnicity	23.35	23.04	17.36
Marital Status			
Married	50.49	47.93	38.88
Widowed	2.37	2.54	2.91
Divorced or Separated	28.36	30.68	35.47
Never Married	18.78	18.85	22.74
Homeowner	50.06	46.13	39.88
Geographic Location			
Non-Metro	20.50	21.02	18.57
Northeast	15.78	15.49	16.05
Midwest	20.85	20.66	24.01
South	39.86	40.46	38.90
West	23.52	23.40	21.04
Employment Status			
Employed	60.83	56.94	49.77
Unemployed	9.54	10.20	11.44
Retired	0.18	0.19	0.12
Disabled	29.44	32.67	38.67
Education Level			
Less Than High School	26.62	28.31	25.94
High School Diploma	38.75	38.21	40.40
Some College	25.74	25.60	26.72
College Degree	8.90	7.87	6.94
SNAP (Food Stamp) Recipient	24.76	28.90	37.14
Grandchild or Parent Present			
No Grandchild or Parent	92.93	92.88	94.52
Grandchild and Parent	6.00	5.91	4.48
Grandchild Only	1.07	1.21	1.01
Female	54.29	55.73	57.69
Living Alone	12.71	13.91	21.96

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 4c. Food Insecurity Rates for Americans Age 60+ & Below 300 % of the Poverty Line in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	8.18	10.20	11.07
Between 50% and 100% of the Poverty Line	32.12	35.17	39.95
Between 100% and 200% of the Poverty Line	45.47	41.72	38.42
Between 200% and 300% of the Poverty Line	14.23	12.91	10.56
Racial Categories			
White	73.11	69.70	69.16
African American	21.24	24.78	25.23
Other	5.65	5.52	5.61
Hispanic Ethnicity	15.79	16.76	14.33
Marital Status			
Married	42.11	39.63	33.56
Widowed	30.82	29.86	29.11
Divorced or Separated	20.71	23.68	30.34
Never Married	6.36	6.83	7.00
Homeowner	62.15	56.69	50.95
Geographic Location			
Non-Metro	24.19	23.86	21.07
Northeast	16.51	15.88	14.87
Midwest	18.72	17.29	16.01
South	44.22	46.70	48.35
West	20.55	20.13	20.76
Employment Status			
Employed	13.58	13.24	11.58
Unemployed	2.47	2.89	3.89
Retired	57.79	52.95	49.34
Disabled	26.16	30.92	35.19
Education Level			
Less Than High School	47.19	48.79	48.44
High School Diploma	31.53	30.09	28.28
Some College	15.31	15.27	17.53
College Degree	5.96	5.85	5.76
SNAP (Food Stamp) Recipient	21.63	26.01	30.03
Grandchild or Parent Present			
No Grandchild or Parent	89.56	88.16	90.15
Grandchild and Parent	6.09	6.93	6.57
Grandchild Only	4.35	4.91	3.28
Female	61.14	60.08	58.77
Living Alone	36.77	38.07	45.02

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 4d. Food Insecurity Rates for Americans Age 50+ & Below 300 % of the Poverty Line in Current Population Survey, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Income Categories			
Below 50% of the Poverty Line	10.08	12.17	14.10
Between 50% and 100% of the Poverty Line	29.34	31.58	35.17
Between 100% and 200% of the Poverty Line	43.29	40.46	37.97
Between 200% and 300% of the Poverty Line	17.29	15.79	12.77
Racial Categories			
White	72.01	69.44	69.57
African American	22.31	24.85	25.16
Other	5.68	5.71	5.27
Hispanic Ethnicity	17.19	17.38	14.63
Marital Status			
Married	43.63	40.90	35.05
Widowed	20.36	19.26	18.26
Divorced or Separated	26.08	29.12	35.07
Never Married	9.94	10.72	11.61
Homeowner	58.01	52.75	47.59
Geographic Location			
Non-Metro	23.10	22.56	20.95
Northeast	16.12	15.45	15.27
Midwest	19.40	19.26	19.07
South	42.76	43.56	44.40
West	21.73	21.73	21.26
Employment Status			
Employed	27.73	27.21	25.21
Unemployed	5.24	6.22	7.52
Retired	33.60	28.44	24.49
Disabled	33.43	38.13	42.78
Education Level			
Less Than High School	39.82	40.31	38.12
High School Diploma	33.16	31.74	30.23
Some College	19.69	20.54	23.95
College Degree	7.34	7.41	7.70
SNAP (Food Stamp) Recipient	24.25	28.94	33.41
Grandchild or Parent Present			
No Grandchild or Parent	89.13	88.50	90.67
Grandchild and Parent	6.96	7.29	6.11
Grandchild Only	3.91	4.21	3.21
Female	59.20	58.98	58.73
Living Alone	30.96	32.22	39.01

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 5a. Food Insecurity Rates for Persons Age 50-59 by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	18.40	11.07	4.02	MT	14.34	8.27	3.71
AK	16.13	9.01	3.39	NE	9.65	5.58	2.88
AZ	18.14	12.08	4.51	NV	11.44	6.25	2.47
AR	21.21	10.15	3.01	NH	9.21	5.04	1.93
CA	16.61	9.65	3.51	NJ	12.08	6.11	2.14
CO	13.15	8.04	3.23	NM	20.04	12.37	6.24
CT	11.10	6.42	3.35	NY	15.40	9.15	3.55
DE	11.26	6.67	2.25	NC	17.23	10.75	3.86
DC	16.38	8.41	4.11	ND	8.01	3.77	1.27
FL	15.49	8.95	3.01	OH	16.78	10.41	3.79
GA	15.93	9.34	3.83	OK	16.34	9.36	3.10
HI	14.16	8.14	2.83	OR	15.84	10.57	4.56
ID	13.71	6.93	2.08	PA	12.97	6.71	2.91
IL	13.01	8.01	3.00	RI	15.21	9.64	3.04
IN	12.91	7.29	3.27	SC	20.35	11.27	5.40
IA	13.83	7.78	3.20	SD	12.90	6.29	3.38
KS	15.99	8.22	3.26	TN	15.31	8.62	2.41
KY	16.59	9.32	3.98	TX	18.83	11.33	4.46
LA	16.91	9.28	3.86	UT	17.00	9.21	3.24
ME	14.71	8.21	3.73	VT	13.07	6.48	2.09
MD	12.51	7.09	3.20	VA	9.96	5.78	2.12
MA	12.32	7.00	3.68	WA	13.47	7.24	2.42
MI	14.17	7.76	3.35	WV	14.11	7.51	3.30
MN	9.00	4.54	1.98	WI	10.24	5.37	1.80
MS	25.54	13.79	5.33	WY	11.64	5.42	2.46
MO	14.22	10.56	4.56				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 5b. Food Insecurity Rates for Persons Age 40-49 by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	17.57	11.56	3.44	MT	20.42	12.42	5.61
AK	20.46	11.49	4.52	NE	16.96	10.52	4.70
AZ	22.44	12.62	3.68	NV	16.32	10.08	4.39
AR	27.40	15.98	5.26	NH	14.85	7.60	3.06
CA	18.56	11.21	3.34	NJ	13.77	7.99	2.73
CO	13.73	8.38	2.91	NM	25.69	13.21	4.04
CT	14.00	7.71	2.73	NY	18.61	11.20	3.75
DE	13.53	6.96	2.72	NC	19.25	12.26	4.05
DC	22.09	15.41	4.46	ND	10.55	6.39	2.01
FL	20.20	12.82	5.42	OH	20.58	12.66	4.99
GA	20.31	12.20	4.69	OK	24.88	15.97	5.94
HI	16.90	10.23	2.90	OR	20.50	11.71	5.47
ID	20.07	10.88	3.56	PA	18.79	10.67	4.14
IL	14.22	8.08	2.59	RI	15.11	9.74	3.77
IN	14.75	9.85	4.27	SC	21.99	13.13	3.96
IA	19.39	11.17	3.80	SD	17.77	10.10	3.19
KS	20.23	11.50	4.66	TN	20.77	13.08	4.29
KY	18.55	9.37	2.84	TX	23.33	14.32	3.97
LA	20.19	12.82	4.25	UT	23.76	13.80	4.69
ME	20.77	13.29	5.91	VT	19.15	10.62	4.23
MD	17.29	9.83	4.25	VA	12.69	7.64	3.02
MA	12.04	6.33	2.66	WA	18.41	11.17	4.36
MI	17.82	9.73	3.68	WV	20.00	11.65	3.65
MN	13.70	8.44	2.60	WI	16.01	8.91	3.07
MS	26.14	15.86	5.55	WY	19.63	10.40	3.69
MO	19.81	12.64	5.28				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 5c. Food Insecurity Rates for Persons Age 60 and Older by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	13.53	8.03	3.12	MT	9.04	4.53	1.48
AK	11.73	5.25	1.72	NE	7.12	3.38	0.68
AZ	11.69	6.09	2.39	NV	9.95	5.76	2.17
AR	17.12	9.61	3.12	NH	7.92	3.14	1.26
CA	12.90	6.21	1.87	NJ	10.46	5.31	2.32
CO	9.65	4.72	2.00	NM	17.41	10.01	2.97
CT	9.30	4.20	1.42	NY	11.21	5.60	1.57
DE	7.62	3.74	1.25	NC	16.48	7.97	2.32
DC	13.69	6.55	1.65	ND	4.23	1.58	0.36
FL	11.73	5.88	2.48	OH	11.23	5.83	1.78
GA	14.96	8.74	2.05	OK	13.70	6.66	2.63
HI	11.14	5.79	1.53	OR	10.60	4.72	2.19
ID	10.90	5.39	1.66	PA	11.59	4.86	1.26
IL	10.32	4.90	1.57	RI	11.22	5.70	1.86
IN	11.35	5.96	1.96	SC	19.05	9.66	2.74
IA	8.67	3.83	1.09	SD	8.82	3.95	0.83
KS	10.38	5.14	2.48	TN	12.28	6.13	1.98
KY	10.95	5.74	2.01	TX	17.33	9.67	3.40
LA	16.79	8.32	1.56	UT	11.06	4.73	1.43
ME	13.31	5.96	2.18	VT	9.29	4.60	1.57
MD	10.51	5.78	2.03	VA	9.56	5.19	1.95
MA	8.06	4.36	1.81	WA	10.06	5.38	2.07
MI	10.95	5.12	1.66	WV	10.97	5.58	1.88
MN	7.87	3.07	1.04	WI	8.77	3.92	0.86
MS	21.27	12.45	4.58	WY	9.50	4.21	1.44
MO	11.04	6.19	1.58				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 5d. Food Insecurity Rates by State for People Age 50+, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	15.60	9.32	3.50	MT	11.27	6.11	2.42
AK	14.27	7.42	2.69	NE	8.26	4.37	1.68
AZ	14.44	8.65	3.29	NV	10.59	5.97	2.30
AR	18.74	9.83	3.07	NH	8.49	3.99	1.56
CA	14.59	7.78	2.62	NJ	11.17	5.66	2.24
CO	11.39	6.37	2.61	NM	18.51	11.00	4.34
CT	10.04	5.11	2.21	NY	12.97	7.09	2.40
DE	9.11	4.95	1.66	NC	16.79	9.11	2.95
DC	14.88	7.38	2.74	ND	5.86	2.53	0.75
FL	13.12	7.02	2.68	OH	13.63	7.81	2.65
GA	15.43	9.03	2.92	OK	14.77	7.75	2.82
HI	12.28	6.68	2.02	OR	12.87	7.25	3.22
ID	12.12	6.06	1.84	PA	12.15	5.61	1.93
IL	11.49	6.25	2.19	RI	12.94	7.39	2.37
IN	12.03	6.54	2.53	SC	19.56	10.29	3.79
IA	10.85	5.50	1.98	SD	10.49	4.91	1.87
KS	12.88	6.51	2.83	TN	13.60	7.21	2.17
KY	13.37	7.28	2.85	TX	18.00	10.41	3.88
LA	16.84	8.71	2.49	UT	13.66	6.70	2.23
ME	13.91	6.92	2.84	VT	10.98	5.44	1.81
MD	11.37	6.35	2.54	VA	9.73	5.45	2.03
MA	9.84	5.46	2.59	WA	11.63	6.24	2.23
MI	12.35	6.26	2.39	WV	12.22	6.35	2.44
MN	8.38	3.74	1.47	WI	9.43	4.57	1.28
MS	23.00	12.99	4.88	WY	10.47	4.76	1.90
MO	12.41	8.07	2.86				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 6a. Food Insecurity Rates for Persons Age 50-59 and with Income Below 200% of the Poverty Line by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	48.19	32.75	14.25	MT	41.65	25.93	13.13
AK	57.85	36.84	17.12	NE	36.68	22.11	13.39
AZ	56.92	38.49	16.11	NV	37.96	24.63	7.35
AR	48.82	23.51	8.16	NH	46.61	29.81	13.11
CA	48.11	30.65	12.45	NJ	44.51	26.63	9.31
CO	40.45	31.37	11.68	NM	46.76	32.86	16.64
CT	48.87	33.29	21.42	NY	50.24	31.18	12.90
DE	39.26	21.90	11.58	NC	47.86	31.55	12.29
DC	44.62	24.06	12.68	ND	30.60	18.56	6.69
FL	48.02	29.44	12.35	OH	48.68	32.34	12.24
GA	50.12	36.42	16.57	OK	45.15	26.18	10.52
HI	39.62	26.75	8.91	OR	54.58	37.08	15.94
ID	39.03	24.24	6.98	PA	42.29	24.34	11.77
IL	42.42	29.09	13.08	RI	47.30	31.53	12.58
IN	46.96	33.29	15.12	SC	54.62	31.51	15.78
IA	51.72	31.19	16.56	SD	43.86	22.68	15.03
KS	46.23	26.69	12.37	TN	44.64	29.97	9.19
KY	45.72	26.82	11.33	TX	49.67	33.36	14.81
LA	39.50	23.97	12.65	UT	50.10	31.68	16.80
ME	46.25	27.23	11.99	VT	45.09	29.01	14.01
MD	53.08	33.89	18.86	VA	46.50	27.23	11.06
MA	45.06	26.78	15.79	WA	51.24	32.39	8.86
MI	47.30	30.09	14.48	WV	32.52	22.48	9.86
MN	36.01	22.41	11.45	WI	36.53	27.66	12.66
MS	55.76	34.72	15.20	WY	37.23	21.74	9.86
MO	49.48	38.70	17.57				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 6b. Food Insecurity Rates for Persons Age 40-49 and with Income Below 200% of the Poverty Line by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	48.47	33.03	11.82	MT	38.41	27.19	14.25
AK	55.31	31.37	15.64	NE	40.78	25.37	11.58
AZ	54.64	32.14	8.19	NV	48.47	32.37	12.24
AR	51.53	36.42	12.02	NH	49.16	30.00	14.41
CA	47.92	31.08	10.06	NJ	46.40	32.92	11.25
CO	41.43	30.16	11.24	NM	53.72	34.09	11.27
CT	51.65	30.87	12.00	NY	46.70	30.03	10.96
DE	44.97	25.51	12.92	NC	45.97	31.16	10.62
DC	56.01	41.32	13.12	ND	26.65	20.82	8.21
FL	50.60	32.20	14.47	OH	52.08	35.36	16.08
GA	52.46	32.54	13.62	OK	59.23	41.90	16.28
HI	44.86	29.95	9.77	OR	50.48	32.41	15.11
ID	42.66	26.83	11.05	PA	51.28	31.69	14.01
IL	45.23	30.63	11.48	RI	45.61	34.56	17.39
IN	49.57	34.87	16.44	SC	48.71	33.68	10.44
IA	53.22	31.93	13.09	SD	44.18	25.69	10.11
KS	51.88	32.54	12.68	TN	51.33	33.81	10.75
KY	53.26	32.90	11.26	TX	55.77	35.34	11.12
LA	44.34	31.60	10.66	UT	57.87	40.12	17.61
ME	52.00	38.06	20.44	VT	49.14	33.60	18.31
MD	53.72	33.18	17.57	VA	48.00	31.22	9.69
MA	45.16	26.21	12.99	WA	62.37	38.48	16.60
MI	45.92	27.69	15.24	WV	46.23	30.70	10.03
MN	39.44	27.61	11.12	WI	38.98	24.96	8.40
MS	56.25	36.95	14.25	WY	45.96	26.89	11.95
MO	54.79	40.08	22.13				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 6c. Food Insecurity Rates for Persons Age 60 and Older and with Income Below 200% of the Poverty Line by State, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	30.44	18.97	6.39	MT	20.09	10.74	3.05
AK	26.35	15.16	6.81	NE	15.79	7.53	2.14
AZ	33.81	17.76	7.04	NV	23.76	14.84	4.14
AR	32.81	20.33	6.93	NH	22.59	6.98	3.17
CA	31.69	15.74	5.71	NJ	30.74	16.09	7.41
CO	25.91	13.62	6.07	NM	33.40	20.88	6.09
CT	29.31	16.57	6.66	NY	28.11	14.45	4.19
DE	23.71	10.63	3.67	NC	32.52	17.18	5.05
DC	37.63	19.58	5.79	ND	9.87	4.18	0.80
FL	27.83	13.85	6.85	OH	25.17	13.39	4.35
GA	33.08	20.18	5.68	OK	31.91	15.80	7.09
HI	32.10	16.48	4.74	OR	31.01	15.00	6.71
ID	20.89	9.97	4.30	PA	24.27	11.27	3.01
IL	25.75	11.10	3.86	RI	25.54	12.04	3.93
IN	24.29	13.55	4.19	SC	35.70	20.27	6.62
IA	19.85	9.08	2.68	SD	21.10	8.84	1.99
KS	25.67	13.05	7.12	TN	25.19	13.54	4.16
KY	23.42	12.07	4.75	TX	37.08	21.19	8.82
LA	34.46	17.60	3.12	UT	27.78	15.92	6.00
ME	26.39	12.35	4.16	VT	21.73	10.37	4.79
MD	31.56	18.69	7.93	VA	30.21	16.86	5.11
MA	21.03	12.21	4.84	WA	25.21	12.50	6.07
MI	26.97	11.64	4.10	WV	23.83	13.41	5.21
MN	20.43	9.49	3.39	WI	23.39	9.69	2.39
MS	38.89	26.51	9.98	WY	20.77	8.90	3.09
MO	24.97	13.27	4.66				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 6d. Food Insecurity Rates by State for People Age 50+ & below 200% of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	36.72	23.84	9.17	MT	27.22	15.76	6.38
AK	42.83	26.51	12.21	NE	21.70	11.66	5.32
AZ	41.71	24.85	10.14	NV	28.13	17.85	5.13
AR	37.95	21.35	7.32	NH	29.04	13.10	5.83
CA	37.75	21.24	8.20	NJ	34.96	19.31	7.99
CO	31.29	20.19	8.14	NM	38.17	25.15	9.85
CT	34.42	20.93	10.51	NY	35.45	20.00	7.08
DE	27.87	13.65	5.78	NC	37.24	21.61	7.28
DC	40.22	21.24	8.35	ND	15.08	7.80	2.28
FL	33.25	18.04	8.33	OH	32.79	19.53	6.91
GA	39.58	26.37	9.83	OK	35.88	18.92	8.12
HI	34.69	20.02	6.17	OR	38.34	21.87	9.58
ID	26.00	13.99	5.06	PA	28.85	14.59	5.24
IL	31.21	16.99	6.88	RI	31.75	17.61	6.40
IN	30.40	18.87	7.14	SC	41.27	23.58	9.32
IA	28.22	14.88	6.32	SD	27.26	12.59	5.52
KS	32.13	17.34	8.77	TN	31.45	18.83	5.78
KY	30.91	17.03	6.96	TX	41.65	25.60	11.00
LA	36.21	19.81	6.42	UT	35.80	21.58	9.88
ME	31.38	16.09	6.12	VT	27.79	15.21	7.18
MD	38.17	23.36	11.29	VA	35.61	20.30	7.08
MA	27.71	16.26	7.88	WA	33.08	18.51	6.92
MI	33.58	17.64	7.48	WV	26.71	16.42	6.75
MN	24.77	13.09	5.63	WI	27.08	14.73	5.27
MS	44.18	29.08	11.62	WY	24.83	12.06	4.76
MO	32.68	21.26	8.72				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 7a. Food Insecurity Rates by State for People Age 50-59 & below 300% of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	40.53	24.15	10.19	MT	29.30	17.69	8.86
AK	48.10	31.35	12.58	NE	25.38	15.92	9.06
AZ	42.52	29.21	11.52	NV	25.70	15.57	4.86
AR	37.21	18.22	5.94	NH	31.09	17.98	7.73
CA	38.01	23.62	8.77	NJ	31.78	18.24	5.84
CO	32.39	22.98	9.17	NM	38.38	25.77	13.47
CT	33.43	21.19	12.03	NY	39.98	24.85	10.11
DE	33.24	18.81	7.75	NC	35.26	23.13	9.47
DC	36.80	22.63	12.15	ND	21.17	11.39	4.41
FL	36.37	21.71	8.81	OH	37.49	25.42	9.26
GA	39.76	26.83	11.23	OK	36.24	20.81	7.54
HI	33.25	21.39	6.37	OR	37.84	26.03	11.08
ID	27.22	13.98	4.11	PA	31.96	17.91	7.87
IL	32.20	21.14	8.47	RI	35.43	23.75	9.36
IN	33.12	22.25	9.70	SC	41.30	23.82	12.31
IA	37.88	22.88	10.38	SD	31.95	15.04	9.54
KS	35.27	19.11	8.11	TN	33.76	21.69	6.33
KY	37.24	20.96	9.46	TX	39.57	25.66	11.00
LA	31.66	18.56	8.66	UT	36.88	22.45	9.75
ME	29.37	17.37	7.63	VT	29.53	16.96	7.08
MD	41.82	26.12	13.11	VA	34.17	20.22	7.99
MA	32.64	19.75	10.87	WA	39.96	21.99	6.93
MI	34.10	21.50	9.67	WV	26.17	17.37	6.87
MN	26.53	15.89	6.95	WI	27.05	17.91	7.88
MS	47.22	28.93	12.53	WY	24.57	12.98	5.41
MO	38.05	29.46	12.63				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 7b. Food Insecurity Rates by State for People Age 40-49 & below 300% of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	35.92	24.36	7.94	MT	30.22	20.47	10.50
AK	45.74	26.29	11.48	NE	32.92	20.04	8.84
AZ	44.17	26.23	6.95	NV	35.40	22.20	8.87
AR	41.36	27.54	9.07	NH	32.83	19.20	8.79
CA	38.99	25.00	7.53	NJ	31.06	20.70	7.17
CO	34.11	22.79	8.32	NM	47.55	28.66	8.83
CT	38.75	23.02	7.64	NY	38.97	24.25	8.12
DE	33.61	18.82	7.56	NC	35.82	24.07	8.61
DC	50.05	35.83	10.72	ND	19.53	13.64	4.70
FL	40.76	25.58	11.12	OH	43.23	27.79	12.30
GA	40.15	23.94	9.73	OK	44.93	31.14	11.96
HI	36.06	23.65	6.70	OR	42.07	23.25	10.24
ID	34.63	21.24	8.35	PA	37.83	22.20	9.04
IL	33.77	21.45	7.57	RI	35.77	26.60	11.73
IN	36.84	25.62	11.74	SC	39.79	25.43	8.08
IA	38.08	21.55	8.01	SD	32.31	18.14	6.17
KS	40.03	23.59	9.33	TN	43.51	26.60	8.58
KY	39.27	22.13	6.95	TX	43.67	27.97	8.42
LA	34.28	24.51	7.58	UT	40.79	27.79	9.41
ME	37.90	26.33	12.90	VT	38.55	23.31	10.27
MD	41.30	25.54	11.35	VA	34.04	22.05	6.98
MA	32.53	19.73	9.66	WA	43.51	26.27	10.37
MI	34.79	19.94	10.08	WV	39.30	24.92	8.10
MN	33.43	20.68	7.43	WI	32.01	18.62	6.63
MS	43.75	29.43	9.91	WY	36.42	21.11	8.71
MO	43.38	29.38	14.28				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 7c. Food Insecurity Rates by State for People Age 60+ & below 300% of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	23.77	14.62	4.63	MT	13.11	6.74	2.04
AK	21.01	9.74	4.32	NE	11.70	5.58	1.41
AZ	24.76	13.71	5.31	NV	18.97	11.28	3.55
AR	25.73	15.21	5.36	NH	15.76	5.17	2.11
CA	24.35	11.97	3.98	NJ	21.68	11.42	5.10
CO	18.65	9.81	4.48	NM	26.91	15.84	5.08
CT	20.73	10.91	4.35	NY	22.52	11.69	3.25
DE	18.30	7.92	2.54	NC	26.35	13.07	3.88
DC	30.86	15.23	3.84	ND	6.81	2.92	0.61
FL	20.62	10.13	4.90	OH	18.70	9.85	3.02
GA	26.25	15.43	4.19	OK	24.00	11.98	4.96
HI	25.81	12.44	4.17	OR	20.34	10.08	4.68
ID	16.42	7.72	2.94	PA	18.51	8.25	2.09
IL	18.31	7.94	2.93	RI	19.31	8.78	2.62
IN	17.84	9.58	3.02	SC	29.08	15.27	4.76
IA	14.64	5.96	1.69	SD	14.87	6.18	1.44
KS	18.49	8.77	4.74	TN	19.90	10.33	3.28
KY	18.34	9.67	3.73	TX	29.58	16.99	6.70
LA	25.89	13.93	2.40	UT	16.78	9.12	3.33
ME	21.61	10.03	3.78	VT	15.67	6.94	3.29
MD	22.07	13.52	5.51	VA	20.65	11.14	4.08
MA	15.12	8.52	3.93	WA	17.92	8.42	3.70
MI	19.27	8.50	2.98	WV	19.44	10.75	4.06
MN	14.70	6.16	2.11	WI	16.11	7.18	1.66
MS	31.75	21.10	7.89	WY	16.43	7.26	2.67
MO	19.09	10.66	3.02				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 7d. Food Insecurity Rates by State for People Age 50+ & below 300% of the Poverty Line, 2001-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure		Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
AL	29.74	18.02	6.61	MT	18.73	10.54	4.41
AK	34.40	20.43	8.40	NE	16.08	8.89	3.86
AZ	31.08	19.23	7.52	NV	21.30	12.77	4.00
AR	29.55	16.21	5.55	NH	20.33	8.99	3.78
CA	29.50	16.36	5.79	NJ	24.93	13.61	5.34
CO	23.88	14.82	6.26	NM	30.94	19.33	8.03
CT	24.42	13.89	6.58	NY	28.54	16.23	5.62
DE	22.88	11.26	4.14	NC	29.34	16.44	5.76
DC	33.05	17.97	6.91	ND	10.94	5.36	1.71
FL	25.16	13.47	6.03	OH	24.93	15.02	5.09
GA	31.56	19.91	6.96	OK	27.74	14.68	5.75
HI	28.43	15.59	4.95	OR	26.02	15.26	6.76
ID	20.14	9.87	3.34	PA	22.31	10.97	3.72
IL	23.02	12.42	4.81	RI	24.36	13.47	4.73
IN	22.36	13.32	5.00	SC	32.96	17.99	7.16
IA	21.32	10.82	4.19	SD	20.05	8.87	3.90
KS	24.22	12.31	5.89	TN	24.73	14.29	4.34
KY	24.87	13.57	5.71	TX	33.30	20.22	8.30
LA	27.90	15.54	4.58	UT	23.51	13.58	5.48
ME	24.05	12.34	4.99	VT	20.26	10.25	4.54
MD	28.10	17.37	7.83	VA	25.26	14.23	5.41
MA	20.09	11.71	5.89	WA	25.01	12.79	4.74
MI	24.24	12.86	5.22	WV	21.82	13.09	5.05
MN	18.36	9.17	3.61	WI	19.29	10.29	3.46
MS	36.88	23.70	9.43	WY	18.95	9.03	3.51
MO	25.37	16.89	6.20				

Source: Authors' calculations from the 2001-2009 December Current Population Survey.

Table 8a. Food Insecurity Rates for Persons Age 50-59 by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	16.91	8.39	4.20
Austin-Round Rock, TX	15.26	8.73	2.81
Baltimore-Towson, MD	18.25	10.67	5.39
Birmingham-Hoover, AL	19.26	7.72	3.27
Boston-Cambridge-Quincy, MA-NH	13.89	8.03	3.51
Buffalo-Niagara Falls, NY	12.37	6.63	4.28
Charlotte-Gastonia-Concord, NC-SC	18.84	14.38	6.09
Chicago-Naperville-Joliet, IN-IN-WI	11.58	7.45	2.47
Cincinnati-Middletown, OH-KY-IN	14.28	10.51	6.45
Cleveland-Elyria-Mentor, OH	16.57	11.07	3.04
Columbus, OH	19.59	10.66	7.40
Dallas-Fort Worth-Arlington, TX	19.26	11.10	4.70
Denver-Aurora, CO	11.68	6.91	3.12
Detroit-Warren-Livonia, MI	15.58	7.73	3.18
Greensboro-High Point, NC	12.53	12.53	7.23
Hartford-West Hartford-East Hartford, CT	10.76	7.89	4.54
Houston-Baytown-Sugar Land, TX	18.34	11.81	5.06
Indianapolis, IN	15.33	9.99	4.99
Jacksonville, FL	19.12	10.06	1.48
Kansas City, MO-KS	11.61	7.88	4.55
Las Vegas-Paradise, NM	14.24	8.17	2.63
Los Angeles-Long Beach-Santa Ana, CA	18.75	10.26	3.78
Louisville, KY-IN	13.09	7.90	4.81
Memphis, TN-MS-AR	15.36	9.58	1.55
Miami-Fort Lauderdale-Miami Beach, FL	16.88	7.56	2.62
Milwaukee-Waukesha-West Allis, WI	13.19	6.95	1.01
Minneapolis-St Paul-Bloomington, MN-WI	9.11	4.46	1.80
Nashville-Davidson-Murfreesboro, TN	10.00	4.44	1.74
New Orleans-Metairie-Kenner, LA	9.70	5.67	2.34
New York-Northern New Jersey-Long Island	14.26	8.73	3.31
Oklahoma City, OK	7.16	4.09	2.34
Orlando, FL	19.45	12.88	5.08
Philadelphia-Camden-Wilmington, PA-NJ-DE	13.51	6.99	2.07
Phoenix-Mesa-Scottsdale, AZ	17.21	13.02	4.36
Pittsburgh, PA	15.26	8.88	3.84
Portland-Vancouver-Beaverton, OR-WA	15.43	10.41	4.81
Richmond, VA	12.16	3.36	0.97
Providence-Fall River-Warwick, MA-RI	15.40	10.09	4.84
Riverside-San Bernardino, CA	22.58	14.83	7.61
Rochester, NY	16.88	5.23	0.64
Sacramento--Arden-Arcade-Roseville, CA	18.68	8.51	2.32
St. Louis, MO-IL	12.75	10.21	3.25
Salt Lake City, UT	20.32	10.16	0.00
San Antonio, TX	25.06	10.90	4.18
San Diego-Carlsbad-San Marcos, CA	10.62	6.84	3.01

Table 8a (continued). Food Insecurity Rates for Persons Age 50-59 by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
San Francisco-Oakland-Fremont, CA	11.29	8.27	2.35
San Jose-Sunnyvale-Santa Clara, CA	7.52	3.69	1.18
Seattle-Tacoma-Bellevue, WA	12.45	7.42	1.99
Tampa-St. Petersburg-Clearwater, FL	14.48	9.16	2.42
Virginia Beach-Norfolk-Newport News, VA-	12.93	9.56	1.94
Washington-Arlington-Alexandria, DC-VA-M	9.84	6.48	3.09

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 8b. Food Insecurity Rates for Persons Age 40-49 by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	16.65	10.46	3.47
Austin-Round Rock, TX	19.60	9.96	1.68
Baltimore-Towson, MD	17.05	10.74	5.08
Birmingham-Hoover, AL	15.11	8.05	2.88
Boston-Cambridge-Quincy, MA-NH	13.85	6.34	2.97
Buffalo-Niagara Falls, NY	26.89	11.92	10.11
Charlotte-Gastonia-Concord, NC-SC	21.32	13.50	6.52
Chicago-Naperville-Joliet, IN-IN-WI	14.19	8.13	2.68
Cincinnati-Middletown, OH-KY-IN	24.50	15.12	6.31
Cleveland-Elyria-Mentor, OH	16.86	9.08	4.61
Columbus, OH	20.41	12.61	4.60
Dallas-Fort Worth-Arlington, TX	20.38	12.84	5.21
Denver-Aurora, CO	15.48	9.71	3.21
Detroit-Warren-Livonia, MI	19.18	10.57	3.36
Greensboro-High Point, NC	15.40	5.59	3.25
Hartford-West Hartford-East Hartford, CT	11.95	6.45	1.19
Houston-Baytown-Sugar Land, TX	22.99	16.34	4.71
Indianapolis, IN	13.11	8.82	3.81
Jacksonville, FL	26.99	14.98	9.75
Kansas City, MO-KS	19.18	11.53	5.26
Las Vegas-Paradise, NM	17.27	8.90	4.70
Los Angeles-Long Beach-Santa Ana, CA	20.60	11.65	3.22
Louisville, KY-IN	17.54	8.05	3.56
Memphis, TN-MS-AR	15.54	8.81	3.78
Miami-Fort Lauderdale-Miami Beach, FL	21.96	12.30	4.94
Milwaukee-Waukesha-West Allis, WI	20.66	8.93	0.74
Minneapolis-St Paul-Bloomington, MN-WI	15.35	9.97	3.51
Nashville-Davidson-Murfreesboro, TN	14.11	7.02	2.63
New Orleans-Metairie-Kenner, LA	16.13	12.15	3.79
New York-Northern New Jersey-Long Island	15.82	9.07	3.16
Oklahoma City, OK	14.65	10.07	4.56
Orlando, FL	21.10	17.26	8.81
Philadelphia-Camden-Wilmington, PA-NJ-DE	15.68	9.21	3.88
Phoenix-Mesa-Scottsdale, AZ	20.33	11.57	4.67
Pittsburgh, PA	23.81	12.76	4.29
Portland-Vancouver-Beaverton, OR-WA	19.37	10.30	6.28
Providence-Fall River-Warwick, MA-RI	17.78	11.62	4.13
Richmond, VA	7.98	3.42	0.00
Riverside-San Bernardino, CA	21.66	13.11	4.36
Rochester, NY	27.01	15.69	5.42
Sacramento--Arden-Arcade-Roseville, CA	19.06	11.59	7.82
St. Louis, MO-IL	20.21	11.74	4.50
Salt Lake City, UT	22.60	13.66	2.56
San Antonio, TX	28.89	17.84	6.76
San Diego-Carlsbad-San Marcos, CA	15.15	10.44	3.18
San Francisco-Oakland-Fremont, CA	14.62	8.91	2.95

Table 8b (Continued). Food Insecurity Rates for Persons Age 40-49 by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
San Jose-Sunnyvale-Santa Clara, CA	16.04	9.47	2.95
Seattle-Tacoma-Bellevue, WA	16.75	10.68	4.71
Tampa-St. Petersburg-Clearwater, FL	20.06	11.75	5.75
Virginia Beach-Norfolk-Newport News, VA-	15.03	7.04	2.27
Washington-Arlington-Alexandria, DC-VA-M	13.43	8.24	4.03

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 8c. Food Insecurity Rates for Persons Age 60 and Older by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	13.88	9.06	1.61
Austin-Round Rock, TX	7.94	2.78	0.63
Baltimore-Towson, MD	11.17	5.00	1.58
Birmingham-Hoover, AL	8.82	3.30	1.33
Boston-Cambridge-Quincy, MA-NH	6.18	2.77	1.22
Buffalo-Niagara Falls, NY	11.53	2.83	0.56
Charlotte-Gastonia-Concord, NC-SC	24.74	12.76	2.46
Chicago-Naperville-Joliet, IN-IN-WI	12.58	6.72	2.17
Cincinnati-Middletown, OH-KY-IN	11.04	4.58	2.60
Cleveland-Elyria-Mentor, OH	14.54	10.87	3.42
Columbus, OH	12.17	7.54	3.11
Dallas-Fort Worth-Arlington, TX	18.34	9.91	3.76
Denver-Aurora, CO	9.56	5.15	2.22
Detroit-Warren-Livonia, MI	13.11	6.82	1.34
Greensboro-High Point, NC	12.23	4.74	0.00
Hartford-West Hartford-East Hartford, CT	12.21	4.77	1.27
Houston-Baytown-Sugar Land, TX	14.78	9.05	4.22
Indianapolis, IN	10.89	5.31	2.54
Jacksonville, FL	19.29	8.39	4.09
Kansas City, MO-KS	12.32	7.87	3.77
Las Vegas-Paradise, NM	9.00	4.77	1.86
Los Angeles-Long Beach-Santa Ana, CA	15.12	7.05	2.23
Louisville, KY-IN	10.51	5.01	0.57
Memphis, TN-MS-AR	10.34	6.40	3.54
Miami-Fort Lauderdale-Miami Beach, FL	14.41	6.86	2.29
Milwaukee-Waukesha-West Allis, WI	13.68	6.61	1.15
Minneapolis-St Paul-Bloomington, MN-WI	7.69	3.25	1.32
Nashville-Davidson-Murfreesboro, TN	13.70	5.73	0.00
New Orleans-Metairie-Kenner, LA	14.00	6.59	1.93
New York-Northern New Jersey-Long Island	10.68	5.71	1.98
Oklahoma City, OK	8.87	4.54	2.31
Orlando, FL	22.74	14.24	6.67
Philadelphia-Camden-Wilmington, PA-NJ-DE	11.53	4.49	1.49
Phoenix-Mesa-Scottsdale, AZ	9.17	5.50	1.91
Pittsburgh, PA	10.98	4.84	1.46
Portland-Vancouver-Beaverton, OR-WA	12.15	6.53	4.83
Providence-Fall River-Warwick, MA-RI	12.84	7.63	2.23
Richmond, VA	10.44	1.41	0.76
Riverside-San Bernardino, CA	14.81	7.93	2.61
Rochester, NY	11.28	6.60	0.69
Sacramento--Arden-Arcade-Roseville, CA	12.92	5.98	2.26
St. Louis, MO-IL	9.08	4.36	1.37
Salt Lake City, UT	17.71	9.50	1.28
San Antonio, TX	16.92	10.56	4.56
San Diego-Carlsbad-San Marcos, CA	8.80	6.00	2.23
San Francisco-Oakland-Fremont, CA	11.00	5.34	1.80
San Jose-Sunnyvale-Santa Clara, CA	6.49	4.01	1.07

Table 8c (Continued). Food Insecurity Rates for Persons Age 60 and Older by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Seattle-Tacoma-Bellevue, WA	8.91	4.64	1.40
Tampa-St. Petersburg-Clearwater, FL	9.35	4.83	2.96
Virginia Beach-Norfolk-Newport News, VA-	14.16	8.67	4.21
Washington-Arlington-Alexandria, DC-VA-M	8.10	4.21	1.52

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 8d. Food Insecurity Rates for Persons Age 50+ by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	15.41	8.72	2.92
Austin-Round Rock, TX	11.38	5.58	1.66
Baltimore-Towson, MD	14.27	7.48	3.25
Birmingham-Hoover, AL	14.08	5.53	2.30
Boston-Cambridge-Quincy, MA-NH	9.63	5.12	2.24
Buffalo-Niagara Falls, NY	11.86	4.30	2.00
Charlotte-Gastonia-Concord, NC-SC	21.83	13.56	4.25
Chicago-Naperville-Joliet, IN-IN-WI	12.11	7.06	2.31
Cincinnati-Middletown, OH-KY-IN	12.56	7.36	4.41
Cleveland-Elyria-Mentor, OH	15.37	10.95	3.27
Columbus, OH	15.78	9.06	5.20
Dallas-Fort Worth-Arlington, TX	18.78	10.48	4.21
Denver-Aurora, CO	10.72	6.11	2.72
Detroit-Warren-Livonia, MI	14.21	7.22	2.16
Greensboro-High Point, NC	12.36	8.18	3.19
Hartford-West Hartford-East Hartford, CT	11.64	5.98	2.54
Houston-Baytown-Sugar Land, TX	16.47	10.36	4.62
Indianapolis, IN	13.01	7.54	3.71
Jacksonville, FL	19.21	9.21	2.82
Kansas City, MO-KS	11.99	7.87	4.13
Las Vegas-Paradise, NM	11.26	6.24	2.19
Los Angeles-Long Beach-Santa Ana, CA	16.73	8.47	2.92
Louisville, KY-IN	11.60	6.24	2.37
Memphis, TN-MS-AR	12.48	7.76	2.69
Miami-Fort Lauderdale-Miami Beach, FL	15.35	7.12	2.42
Milwaukee-Waukesha-West Allis, WI	13.45	6.77	1.08
Minneapolis-St Paul-Bloomington, MN-WI	8.39	3.85	1.56
Nashville-Davidson-Murfreesboro, TN	11.90	5.10	0.85
New Orleans-Metairie-Kenner, LA	12.05	6.17	2.12
New York-Northern New Jersey-Long Island	12.26	7.04	2.57
Oklahoma City, OK	8.14	4.35	2.32
Orlando, FL	21.33	13.66	5.99
Philadelphia-Camden-Wilmington, PA-NJ-DE	12.34	5.51	1.73
Phoenix-Mesa-Scottsdale, AZ	13.04	9.12	3.09
Pittsburgh, PA	12.87	6.62	2.51
Portland-Vancouver-Beaverton, OR-WA	13.61	8.27	4.82
Providence-Fall River-Warwick, MA-RI	13.97	8.72	3.38
Richmond, VA	11.13	2.19	0.84
Riverside-San Bernardino, CA	18.42	11.14	4.93
Rochester, NY	13.93	5.96	0.67
Sacramento--Arden-Arcade-Roseville, CA	15.64	7.17	2.29
St. Louis, MO-IL	10.85	7.19	2.28
Salt Lake City, UT	18.72	9.76	0.78
San Antonio, TX	20.28	10.70	4.40
San Diego-Carlsbad-San Marcos, CA	9.66	6.39	2.60
San Francisco-Oakland-Fremont, CA	11.12	6.61	2.04

Table 8d (Continued). Food Insecurity Rates for Persons Age 50+ by Metropolitan Areas >1,000,000 - 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
San Jose-Sunnyvale-Santa Clara, CA	7.03	3.84	1.13
Seattle-Tacoma-Bellevue, WA	10.59	5.96	1.68
Tampa-St. Petersburg-Clearwater, FL	11.32	6.49	2.75
Virginia Beach-Norfolk-Newport News, VA-	13.65	9.04	3.27
Washington-Arlington-Alexandria, DC-VA-M	8.95	5.32	2.29

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 9a. Food Insecurity Rates for Persons Age 50-59 and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	51.81	37.50	20.94
Austin-Round Rock, TX	37.51	32.04	13.12
Baltimore-Towson, MD	63.26	43.76	24.59
Birmingham-Hoover, AL	47.86	34.00	16.26
Boston-Cambridge-Quincy, MA-NH	58.48	33.25	18.29
Buffalo-Niagara Falls, NY	68.90	34.29	16.58
Charlotte-Gastonia-Concord, NC-SC	36.38	27.36	15.48
Chicago-Naperville-Joliet, IN-IN-WI	44.49	33.79	11.03
Cincinnati-Middletown, OH-KY-IN	59.33	51.73	34.67
Cleveland-Elyria-Mentor, OH	48.63	23.78	9.74
Columbus, OH	46.93	35.93	26.60
Dallas-Fort Worth-Arlington, TX	59.27	43.35	21.13
Denver-Aurora, CO	39.30	35.04	17.61
Detroit-Warren-Livonia, MI	53.79	30.36	15.58
Greensboro-High Point, NC	100.00	100.00	57.68
Hartford-West Hartford-East Hartford, CT	52.92	49.32	30.21
Houston-Baytown-Sugar Land, TX	43.31	35.90	14.58
Indianapolis, IN	56.00	39.59	20.88
Jacksonville, FL	52.81	27.97	0.00
Kansas City, MO-KS	56.19	38.86	26.43
Las Vegas-Paradise, NM	42.99	26.43	3.75
Los Angeles-Long Beach-Santa Ana, CA	48.85	27.70	9.21
Louisville, KY-IN	53.96	34.43	16.64
Memphis, TN-MS-AR	44.47	26.64	7.15
Miami-Fort Lauderdale-Miami Beach, FL	51.24	25.12	11.54
Milwaukee-Waukesha-West Allis, WI	34.75	25.37	6.56
Minneapolis-St Paul-Bloomington, MN-WI	39.04	26.56	13.28
Nashville-Davidson-Murfreesboro, TN	39.37	29.53	19.69
New Orleans-Metairie-Kenner, LA	42.06	23.39	14.22
New York-Northern New Jersey-Long Island	47.88	29.01	11.85
Oklahoma City, OK	21.02	14.67	5.81
Orlando, FL	70.12	45.96	21.40
Philadelphia-Camden-Wilmington, PA-NJ-DE	52.48	35.81	11.02
Phoenix-Mesa-Scottsdale, AZ	52.28	35.35	13.48
Pittsburgh, PA	45.64	29.55	8.83
Portland-Vancouver-Beaverton, OR-WA	63.34	39.95	21.29
Providence-Fall River-Warwick, MA-RI	45.20	35.67	23.62
Richmond, VA	50.98	21.49	6.19
Riverside-San Bernardino, CA	53.35	38.09	21.72
Rochester, NY	52.14	8.19	0.00
Sacramento--Arden-Arcade-Roseville, CA	42.53	35.38	9.97

Table 9a (Continued). Food Insecurity Rates for Persons Age 50-59 and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
St. Louis, MO-IL	55.94	51.65	15.77
Salt Lake City, UT	49.46	21.85	0.00
San Antonio, TX	48.90	16.13	16.13
San Diego-Carlsbad-San Marcos, CA	44.28	35.06	16.40
San Francisco-Oakland-Fremont, CA	46.12	35.63	15.98
San Jose-Sunnyvale-Santa Clara, CA	35.86	16.99	6.13
Seattle-Tacoma-Bellevue, WA	51.97	34.12	10.28
Tampa-St. Petersburg-Clearwater, FL	45.70	37.17	9.28
Virginia Beach-Norfolk-Newport News, VA-	48.24	34.47	6.72
Washington-Arlington-Alexandria, DC-VA-M	45.28	29.18	17.53

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 9b. Food Insecurity Rates for Persons Age 40-49 and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	46.38	27.22	11.60
Austin-Round Rock, TX	56.39	25.09	13.02
Baltimore-Towson, MD	47.95	34.29	19.56
Birmingham-Hoover, AL	49.97	37.05	17.77
Boston-Cambridge-Quincy, MA-NH	44.28	26.03	14.95
Buffalo-Niagara Falls, NY	57.41	37.42	34.23
Charlotte-Gastonia-Concord, NC-SC	43.90	31.74	14.12
Chicago-Naperville-Joliet, IN-IN-WI	48.60	36.07	13.64
Cincinnati-Middletown, OH-KY-IN	69.89	33.74	14.43
Cleveland-Elyria-Mentor, OH	48.37	24.37	15.26
Columbus, OH	52.19	34.45	15.17
Dallas-Fort Worth-Arlington, TX	62.91	38.64	17.98
Denver-Aurora, CO	40.52	30.76	10.24
Detroit-Warren-Livonia, MI	48.53	29.74	17.80
Greensboro-High Point, NC	46.72	16.96	9.85
Hartford-West Hartford-East Hartford, CT	43.98	17.75	4.04
Houston-Baytown-Sugar Land, TX	55.34	38.99	11.12
Indianapolis, IN	53.90	44.46	22.62
Jacksonville, FL	61.60	36.08	27.60
Kansas City, MO-KS	65.88	39.26	22.82
Las Vegas-Paradise, NM	47.73	28.63	11.99
Los Angeles-Long Beach-Santa Ana, CA	50.78	31.11	8.27
Louisville, KY-IN	46.45	27.10	3.68
Memphis, TN-MS-AR	62.53	28.73	18.43
Miami-Fort Lauderdale-Miami Beach, FL	49.97	28.17	14.05
Milwaukee-Waukesha-West Allis, WI	49.59	26.70	2.68
Minneapolis-St Paul-Bloomington, MN-WI	48.89	34.90	19.75
Nashville-Davidson-Murfreesboro, TN	75.24	44.19	9.13
New Orleans-Metairie-Kenner, LA	48.66	34.70	14.74
New York-Northern New Jersey-Long Island	44.79	26.87	9.58
Oklahoma City, OK	65.42	44.96	21.97
Orlando, FL	43.81	37.26	19.23
Philadelphia-Camden-Wilmington, PA-NJ-DE	56.51	34.14	17.08
Phoenix-Mesa-Scottsdale, AZ	61.79	32.41	9.93
Pittsburgh, PA	45.44	29.44	11.71
Portland-Vancouver-Beaverton, OR-WA	53.88	36.74	24.71
Providence-Fall River-Warwick, MA-RI	53.07	34.84	19.89
Richmond, VA	23.14	17.37	0.00
Riverside-San Bernardino, CA	47.31	27.56	12.83

Table 9b (Continued). Food Insecurity Rates for Persons Age 40-49 and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	52.77	37.79	12.14
Sacramento--Arden-Arcade-Roseville, CA	50.33	38.62	30.05
St. Louis, MO-IL	72.49	47.78	29.10
Salt Lake City, UT	56.62	34.69	10.81
San Antonio, TX	56.06	37.54	12.29
San Diego-Carlsbad-San Marcos, CA	45.93	36.51	11.23
San Francisco-Oakland-Fremont, CA	45.95	30.58	14.10
San Jose-Sunnyvale-Santa Clara, CA	43.02	21.90	0.00
Seattle-Tacoma-Bellevue, WA	61.06	31.52	14.66
Tampa-St. Petersburg-Clearwater, FL	56.06	35.49	18.46
Virginia Beach-Norfolk-Newport News, VA-	42.37	26.66	4.04
Washington-Arlington-Alexandria, DC-VA-M	47.19	31.93	15.80

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 9c. Food Insecurity Rates for Persons Age 60 and Older and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	34.90	28.49	5.47
Austin-Round Rock, TX	21.84	16.61	5.65
Baltimore-Towson, MD	29.32	14.91	4.09
Birmingham-Hoover, AL	24.29	10.46	2.20
Boston-Cambridge-Quincy, MA-NH	16.53	9.34	4.10
Buffalo-Niagara Falls, NY	31.67	5.45	0.00
Charlotte-Gastonia-Concord, NC-SC	57.38	30.46	6.94
Chicago-Naperville-Joliet, IN-IN-WI	30.45	15.30	4.44
Cincinnati-Middletown, OH-KY-IN	33.36	15.60	7.27
Cleveland-Elyria-Mentor, OH	38.43	29.26	11.34
Columbus, OH	31.22	14.85	2.05
Dallas-Fort Worth-Arlington, TX	47.79	27.36	13.01
Denver-Aurora, CO	31.96	17.63	9.09
Detroit-Warren-Livonia, MI	36.95	19.12	4.20
Greensboro-High Point, NC	31.89	12.36	0.00
Hartford-West Hartford-East Hartford, CT	35.10	21.23	6.54
Houston-Baytown-Sugar Land, TX	28.86	19.10	11.63
Indianapolis, IN	26.81	16.31	8.10
Jacksonville, FL	38.22	12.78	9.97
Kansas City, MO-KS	35.00	21.63	11.01
Las Vegas-Paradise, NM	18.28	11.47	2.40
Los Angeles-Long Beach-Santa Ana, CA	31.04	14.70	5.25
Louisville, KY-IN	33.16	13.30	0.00
Memphis, TN-MS-AR	17.76	13.58	7.10
Miami-Fort Lauderdale-Miami Beach, FL	30.29	15.05	5.00
Milwaukee-Waukesha-West Allis, WI	35.13	15.61	1.74
Minneapolis-St Paul-Bloomington, MN-WI	24.41	11.58	6.35
Nashville-Davidson-Murfreesboro, TN	25.07	9.37	0.00
New Orleans-Metairie-Kenner, LA	33.21	14.46	7.39
New York-Northern New Jersey-Long Island	28.33	15.46	4.82
Oklahoma City, OK	27.50	15.16	9.07
Orlando, FL	43.10	28.46	16.85
Philadelphia-Camden-Wilmington, PA-NJ-DE	32.43	19.24	7.84
Phoenix-Mesa-Scottsdale, AZ	36.81	20.05	8.40
Pittsburgh, PA	20.66	11.57	4.42
Portland-Vancouver-Beaverton, OR-WA	34.32	19.62	15.51
Providence-Fall River-Warwick, MA-RI	28.67	16.87	6.10
Richmond, VA	30.43	6.04	2.18
Riverside-San Bernardino, CA	36.07	20.23	8.39

Table 9c (Continued). Food Insecurity Rates for Persons Age 60 and Older and with Income Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	30.18	10.49	3.22
Sacramento--Arden-Arcade-Roseville, CA	38.63	19.49	9.40
St. Louis, MO-IL	33.03	16.71	5.42
Salt Lake City, UT	38.72	23.81	4.69
San Antonio, TX	34.87	26.64	11.96
San Diego-Carlsbad-San Marcos, CA	23.26	14.47	7.88
San Francisco-Oakland-Fremont, CA	38.40	20.27	7.35
San Jose-Sunnyvale-Santa Clara, CA	15.55	11.45	8.24
Seattle-Tacoma-Bellevue, WA	21.57	10.42	6.58
Tampa-St. Petersburg-Clearwater, FL	26.17	13.16	7.19
Virginia Beach-Norfolk-Newport News, VA-	34.98	12.34	6.54
Washington-Arlington-Alexandria, DC-VA-M	28.84	20.71	10.49

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 9d. Food Insecurity Rates for Persons Age 50+ and Incomes Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	42.66	32.62	12.57
Austin-Round Rock, TX	30.58	25.22	9.82
Baltimore-Towson, MD	41.39	25.16	11.37
Birmingham-Hoover, AL	34.26	20.42	8.15
Boston-Cambridge-Quincy, MA-NH	32.31	18.34	9.44
Buffalo-Niagara Falls, NY	38.78	10.96	3.17
Charlotte-Gastonia-Concord, NC-SC	48.87	29.20	10.40
Chicago-Naperville-Joliet, IN-IN-WI	35.55	22.01	6.83
Cincinnati-Middletown, OH-KY-IN	42.33	28.08	16.73
Cleveland-Elyria-Mentor, OH	41.35	27.69	10.88
Columbus, OH	39.19	25.54	14.51
Dallas-Fort Worth-Arlington, TX	52.68	34.17	16.47
Denver-Aurora, CO	34.84	24.46	12.43
Detroit-Warren-Livonia, MI	43.27	23.34	8.48
Greensboro-High Point, NC	45.89	30.37	11.86
Hartford-West Hartford-East Hartford, CT	40.01	28.97	13.06
Houston-Baytown-Sugar Land, TX	35.11	26.38	12.91
Indianapolis, IN	37.71	25.01	12.87
Jacksonville, FL	45.18	20.02	5.21
Kansas City, MO-KS	41.36	26.80	15.63
Las Vegas-Paradise, NM	27.32	16.94	2.89
Los Angeles-Long Beach-Santa Ana, CA	37.53	19.44	6.69
Louisville, KY-IN	39.88	20.12	5.37
Memphis, TN-MS-AR	27.84	18.51	7.11
Miami-Fort Lauderdale-Miami Beach, FL	35.46	17.53	6.61
Milwaukee-Waukesha-West Allis, WI	34.99	19.29	3.56
Minneapolis-St Paul-Bloomington, MN-WI	29.38	16.66	8.70
Nashville-Davidson-Murfreesboro, TN	27.47	12.75	3.30
New Orleans-Metairie-Kenner, LA	36.25	17.53	9.74
New York-Northern New Jersey-Long Island	35.35	20.32	7.34
Oklahoma City, OK	24.88	14.97	7.75
Orlando, FL	52.53	34.56	18.44
Philadelphia-Camden-Wilmington, PA-NJ-DE	38.97	24.64	8.88
Phoenix-Mesa-Scottsdale, AZ	44.06	27.22	10.78
Pittsburgh, PA	26.53	15.80	5.45
Portland-Vancouver-Beaverton, OR-WA	42.91	25.64	17.22
Providence-Fall River-Warwick, MA-RI	34.04	22.98	11.79
Richmond, VA	38.28	11.94	3.71
Riverside-San Bernardino, CA	43.47	27.87	14.10

Table 9d (Continued). Food Insecurity Rates for Persons Age 50+ and Incomes Below 200% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	37.47	9.72	2.15
Sacramento--Arden-Arcade-Roseville, CA	40.07	25.36	9.61
St. Louis, MO-IL	41.10	29.01	9.07
Salt Lake City, UT	42.94	23.04	2.84
San Antonio, TX	39.69	23.03	13.39
San Diego-Carlsbad-San Marcos, CA	30.46	21.53	10.80
San Francisco-Oakland-Fremont, CA	40.45	24.35	9.64
San Jose-Sunnyvale-Santa Clara, CA	24.67	13.94	7.29
Seattle-Tacoma-Bellevue, WA	31.68	18.30	7.81
Tampa-St. Petersburg-Clearwater, FL	31.10	19.22	7.72
Virginia Beach-Norfolk-Newport News, VA-	39.36	19.66	6.60
Washington-Arlington-Alexandria, DC-VA-M	35.35	24.07	13.28

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 10a. Food Insecurity Rates for People Age 50-59 & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	41.74	25.68	14.08
Austin-Round Rock, TX	36.92	26.33	12.73
Baltimore-Towson, MD	52.37	36.46	19.93
Birmingham-Hoover, AL	45.68	19.65	9.40
Boston-Cambridge-Quincy, MA-NH	41.39	22.57	11.64
Buffalo-Niagara Falls, NY	41.60	14.95	7.23
Charlotte-Gastonia-Concord, NC-SC	36.18	27.71	18.06
Chicago-Naperville-Joliet, IN-IN-WI	29.46	21.21	7.17
Cincinnati-Middletown, OH-KY-IN	44.69	34.40	20.55
Cleveland-Elyria-Mentor, OH	30.33	16.37	7.15
Columbus, OH	35.67	28.80	19.87
Dallas-Fort Worth-Arlington, TX	48.57	33.13	17.43
Denver-Aurora, CO	31.88	23.80	11.88
Detroit-Warren-Livonia, MI	41.64	24.15	11.20
Greensboro-High Point, NC	80.91	80.91	46.67
Hartford-West Hartford-East Hartford, CT	38.40	34.68	17.84
Houston-Baytown-Sugar Land, TX	34.04	28.35	11.88
Indianapolis, IN	41.19	30.65	15.72
Jacksonville, FL	45.15	22.90	2.02
Kansas City, MO-KS	36.43	25.19	14.89
Las Vegas-Paradise, NM	30.41	17.63	3.12
Los Angeles-Long Beach-Santa Ana, CA	39.32	21.69	6.70
Louisville, KY-IN	39.74	26.74	15.47
Memphis, TN-MS-AR	38.91	24.55	4.86
Miami-Fort Lauderdale-Miami Beach, FL	38.27	18.19	7.51
Milwaukee-Waukesha-West Allis, WI	30.69	20.81	4.66
Minneapolis-St Paul-Bloomington, MN-WI	31.27	17.36	8.38
Nashville-Davidson-Murfreesboro, TN	31.03	16.32	6.37
New Orleans-Metairie-Kenner, LA	29.60	17.79	9.00
New York-Northern New Jersey-Long Island	38.59	24.05	9.42
Oklahoma City, OK	18.12	11.98	5.74
Orlando, FL	46.80	30.67	14.28
Philadelphia-Camden-Wilmington, PA-NJ-DE	34.21	21.18	6.24
Phoenix-Mesa-Scottsdale, AZ	44.81	32.07	10.42
Pittsburgh, PA	37.68	24.52	8.12
Portland-Vancouver-Beaverton, OR-WA	46.30	33.48	14.80
Providence-Fall River-Warwick, MA-RI	32.63	25.50	15.12
Richmond, VA	27.73	10.86	3.13
Riverside-San Bernardino, CA	47.39	31.96	17.07

Table 10a (Continued). Food Insecurity Rates for People Age 50-59 & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	40.36	12.63	2.47
Sacramento--Arden-Arcade-Roseville, CA	37.54	20.42	6.31
St. Louis, MO-IL	41.38	36.77	10.13
Salt Lake City, UT	46.06	17.32	0.00
San Antonio, TX	42.07	16.27	11.93
San Diego-Carlsbad-San Marcos, CA	31.88	24.46	10.72
San Francisco-Oakland-Fremont, CA	37.50	28.59	8.28
San Jose-Sunnyvale-Santa Clara, CA	18.09	9.80	2.70
Seattle-Tacoma-Bellevue, WA	38.78	23.28	5.67
Tampa-St. Petersburg-Clearwater, FL	32.74	22.47	8.43
Virginia Beach-Norfolk-Newport News, VA-	40.56	25.94	7.50
Washington-Arlington-Alexandria, DC-VA-M	40.87	28.29	14.94

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 10b. Food Insecurity Rates for People Age 40-49 & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	42.01	23.32	9.30
Austin-Round Rock, TX	46.95	22.11	8.35
Baltimore-Towson, MD	36.93	26.20	11.94
Birmingham-Hoover, AL	40.23	26.24	9.38
Boston-Cambridge-Quincy, MA-NH	35.00	20.37	12.45
Buffalo-Niagara Falls, NY	48.29	24.34	22.26
Charlotte-Gastonia-Concord, NC-SC	34.88	25.87	12.59
Chicago-Naperville-Joliet, IN-IN-WI	35.06	24.52	8.65
Cincinnati-Middletown, OH-KY-IN	56.03	30.86	17.79
Cleveland-Elyria-Mentor, OH	43.95	23.93	13.06
Columbus, OH	40.34	24.82	9.42
Dallas-Fort Worth-Arlington, TX	48.33	31.20	14.00
Denver-Aurora, CO	35.71	24.30	8.36
Detroit-Warren-Livonia, MI	38.54	23.11	12.28
Greensboro-High Point, NC	37.96	13.78	8.00
Hartford-West Hartford-East Hartford, CT	32.50	20.46	1.65
Houston-Baytown-Sugar Land, TX	44.36	33.13	10.02
Indianapolis, IN	39.66	27.22	13.17
Jacksonville, FL	61.19	31.39	22.21
Kansas City, MO-KS	47.64	28.33	13.30
Las Vegas-Paradise, NM	34.44	18.59	8.76
Los Angeles-Long Beach-Santa Ana, CA	39.28	23.89	6.34
Louisville, KY-IN	33.29	15.80	3.48
Memphis, TN-MS-AR	47.53	23.68	14.59
Miami-Fort Lauderdale-Miami Beach, FL	41.57	22.12	9.37
Milwaukee-Waukesha-West Allis, WI	46.61	19.66	2.75
Minneapolis-St Paul-Bloomington, MN-WI	41.18	25.25	11.98
Nashville-Davidson-Murfreesboro, TN	59.27	30.92	11.57
New Orleans-Metairie-Kenner, LA	32.73	24.09	9.14
New York-Northern New Jersey-Long Island	34.91	20.76	7.51
Oklahoma City, OK	47.17	32.89	15.79
Orlando, FL	41.80	37.71	20.19
Philadelphia-Camden-Wilmington, PA-NJ-DE	32.29	18.56	8.35
Phoenix-Mesa-Scottsdale, AZ	47.99	26.98	10.51
Pittsburgh, PA	47.62	27.60	9.10
Portland-Vancouver-Beaverton, OR-WA	45.26	24.41	14.93
Providence-Fall River-Warwick, MA-RI	41.89	28.25	13.62
Richmond, VA	21.81	16.01	0.00
Riverside-San Bernardino, CA	38.72	23.69	9.55

Table 10b (Continued). Food Insecurity Rates for People Age 40-49 & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	50.21	29.01	7.61
Sacramento--Arden-Arcade-Roseville, CA	43.82	29.92	22.20
St. Louis, MO-IL	57.94	35.08	16.00
Salt Lake City, UT	33.32	21.83	5.66
San Antonio, TX	52.88	37.44	12.46
San Diego-Carlsbad-San Marcos, CA	37.94	31.22	8.01
San Francisco-Oakland-Fremont, CA	44.54	29.04	10.64
San Jose-Sunnyvale-Santa Clara, CA	41.37	26.25	5.35
Seattle-Tacoma-Bellevue, WA	45.97	27.11	10.61
Tampa-St. Petersburg-Clearwater, FL	45.74	28.43	15.09
Virginia Beach-Norfolk-Newport News, VA-	28.50	14.83	3.55
Washington-Arlington-Alexandria, DC-VA-M	36.97	24.81	11.05

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 10c. Food Insecurity Rates for People Age 60+ & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	29.11	21.03	4.62
Austin-Round Rock, TX	12.56	9.55	3.25
Baltimore-Towson, MD	21.78	10.73	3.33
Birmingham-Hoover, AL	16.41	6.20	1.30
Boston-Cambridge-Quincy, MA-NH	11.21	5.40	2.72
Buffalo-Niagara Falls, NY	19.82	3.55	0.00
Charlotte-Gastonia-Concord, NC-SC	45.13	21.59	5.48
Chicago-Naperville-Joliet, IN-IN-WI	22.50	11.24	4.29
Cincinnati-Middletown, OH-KY-IN	26.44	14.41	8.19
Cleveland-Elyria-Mentor, OH	23.21	17.82	6.66
Columbus, OH	17.38	8.43	0.95
Dallas-Fort Worth-Arlington, TX	35.00	19.66	10.05
Denver-Aurora, CO	22.97	12.92	5.98
Detroit-Warren-Livonia, MI	26.17	13.65	3.19
Greensboro-High Point, NC	20.30	7.87	0.00
Hartford-West Hartford-East Hartford, CT	25.04	15.45	4.14
Houston-Baytown-Sugar Land, TX	25.16	17.73	8.38
Indianapolis, IN	20.21	12.35	5.34
Jacksonville, FL	21.56	6.23	4.86
Kansas City, MO-KS	23.96	15.35	7.65
Las Vegas-Paradise, NM	15.29	9.08	2.97
Los Angeles-Long Beach-Santa Ana, CA	25.61	12.53	4.23
Louisville, KY-IN	20.67	7.58	0.00
Memphis, TN-MS-AR	12.60	9.63	5.03
Miami-Fort Lauderdale-Miami Beach, FL	23.49	11.19	3.77
Milwaukee-Waukesha-West Allis, WI	24.24	13.28	1.68
Minneapolis-St Paul-Bloomington, MN-WI	16.08	6.82	3.49
Nashville-Davidson-Murfreesboro, TN	25.58	10.05	0.00
New Orleans-Metairie-Kenner, LA	23.74	10.19	4.22
New York-Northern New Jersey-Long Island	23.26	12.60	4.17
Oklahoma City, OK	19.81	11.70	5.95
Orlando, FL	34.53	22.63	13.74
Philadelphia-Camden-Wilmington, PA-NJ-DE	21.83	12.61	4.69
Phoenix-Mesa-Scottsdale, AZ	23.77	14.35	4.86
Pittsburgh, PA	17.16	7.83	2.62
Portland-Vancouver-Beaverton, OR-WA	22.94	12.88	10.22
Providence-Fall River-Warwick, MA-RI	20.61	11.01	3.72
Richmond, VA	20.22	3.73	2.01
Riverside-San Bernardino, CA	25.14	13.67	4.75

Table 10c (Continued). Food Insecurity Rates for People Age 60+ & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	27.58	13.37	2.32
Sacramento--Arden-Arcade-Roseville, CA	33.12	13.78	6.81
St. Louis, MO-IL	18.53	8.83	2.86
Salt Lake City, UT	35.55	15.70	3.09
San Antonio, TX	30.79	20.01	9.14
San Diego-Carlsbad-San Marcos, CA	17.11	11.27	5.23
San Francisco-Oakland-Fremont, CA	28.30	13.87	4.51
San Jose-Sunnyvale-Santa Clara, CA	15.85	8.55	4.07
Seattle-Tacoma-Bellevue, WA	16.46	6.97	3.66
Tampa-St. Petersburg-Clearwater, FL	19.38	10.41	6.09
Virginia Beach-Norfolk-Newport News, VA-	23.36	9.64	6.90
Washington-Arlington-Alexandria, DC-VA-M	21.94	15.14	6.67

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 10d. Food Insecurity Rates for People Age 50+ & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Atlanta-Sandy Springs-Marietta, GA	34.87	23.16	8.93
Austin-Round Rock, TX	24.80	17.98	8.01
Baltimore-Towson, MD	31.75	19.11	8.74
Birmingham-Hoover, AL	28.97	11.97	4.78
Boston-Cambridge-Quincy, MA-NH	21.16	11.06	5.66
Buffalo-Niagara Falls, NY	24.58	6.04	1.58
Charlotte-Gastonia-Concord, NC-SC	41.77	23.89	10.20
Chicago-Naperville-Joliet, IN-IN-WI	25.17	15.06	5.40
Cincinnati-Middletown, OH-KY-IN	32.86	21.45	12.54
Cleveland-Elyria-Mentor, OH	25.31	17.39	6.80
Columbus, OH	25.28	17.23	9.12
Dallas-Fort Worth-Arlington, TX	40.70	25.32	13.15
Denver-Aurora, CO	26.68	17.45	8.44
Detroit-Warren-Livonia, MI	32.04	17.63	6.23
Greensboro-High Point, NC	30.55	20.22	7.89
Hartford-West Hartford-East Hartford, CT	28.91	21.02	8.11
Houston-Baytown-Sugar Land, TX	28.96	22.27	9.87
Indianapolis, IN	28.18	19.31	9.29
Jacksonville, FL	31.25	13.07	3.69
Kansas City, MO-KS	28.07	18.60	10.04
Las Vegas-Paradise, NM	20.93	12.27	3.02
Los Angeles-Long Beach-Santa Ana, CA	30.73	15.95	5.15
Louisville, KY-IN	27.14	14.08	5.25
Memphis, TN-MS-AR	22.79	15.41	4.97
Miami-Fort Lauderdale-Miami Beach, FL	27.78	13.22	4.86
Milwaukee-Waukesha-West Allis, WI	26.24	15.62	2.60
Minneapolis-St Paul-Bloomington, MN-WI	21.46	10.55	5.22
Nashville-Davidson-Murfreesboro, TN	27.19	11.90	1.88
New Orleans-Metairie-Kenner, LA	25.62	12.63	5.75
New York-Northern New Jersey-Long Island	28.74	16.70	6.05
Oklahoma City, OK	19.21	11.79	5.88
Orlando, FL	38.81	25.44	13.93
Philadelphia-Camden-Wilmington, PA-NJ-DE	26.07	15.55	5.22
Phoenix-Mesa-Scottsdale, AZ	32.72	21.88	7.23
Pittsburgh, PA	23.30	12.83	4.27
Portland-Vancouver-Beaverton, OR-WA	29.86	18.98	11.57
Providence-Fall River-Warwick, MA-RI	24.64	15.86	7.54
Richmond, VA	22.88	6.25	2.40
Riverside-San Bernardino, CA	33.68	20.68	9.48

Table 10d (Continued). Food Insecurity Rates for People Age 50+ & Below 300% of the Poverty Line by Metropolitan Areas >1,000,000 , 2004-2009

	Marginal Food Insecurity	Food Insecurity	Very Low Food Secure
Rochester, NY	33.21	13.04	2.39
Sacramento--Arden-Arcade-Roseville, CA	35.02	16.63	6.59
St. Louis, MO-IL	26.31	18.34	5.34
Salt Lake City, UT	39.23	16.27	2.01
San Antonio, TX	34.52	18.78	10.06
San Diego-Carlsbad-San Marcos, CA	22.22	15.84	7.13
San Francisco-Oakland-Fremont, CA	31.39	18.82	5.78
San Jose-Sunnyvale-Santa Clara, CA	16.92	9.14	3.41
Seattle-Tacoma-Bellevue, WA	23.92	12.42	4.33
Tampa-St. Petersburg-Clearwater, FL	23.58	14.21	6.83
Virginia Beach-Norfolk-Newport News, VA-	28.52	14.53	7.08
Washington-Arlington-Alexandria, DC-VA-M	29.35	20.28	9.91

Source: Authors' calculations from the 2004-2009 December Current Population Survey.

Table 11. Estimated Determinants of Food Insecurity Rates among Persons Age 40 and Older

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.353***	0.065***	0.303***	0.037***	0.165***	0.009***
	(0.014)	(0.002)	(0.015)	(0.002)	(0.021)	(0.001)
Other Race	0.068***	0.012***	0.095***	0.012***	0.029	0.002
	(0.020)	(0.004)	(0.023)	(0.003)	(0.032)	(0.002)
Hispanic	0.213***	0.039***	0.176***	0.022***	-0.021	-0.001
	(0.015)	(0.003)	(0.017)	(0.002)	(0.024)	(0.001)
High School	-0.207***	-0.038***	-0.192***	-0.024***	-0.120***	-0.007***
	(0.013)	(0.002)	(0.014)	(0.002)	(0.020)	(0.001)
Some College	-0.247***	-0.045***	-0.195***	-0.024***	-0.057***	-0.003***
	(0.014)	(0.003)	(0.016)	(0.002)	(0.022)	(0.001)
College	-0.565***	-0.103***	-0.509***	-0.063***	-0.354***	-0.020***
	(0.015)	(0.003)	(0.019)	(0.002)	(0.027)	(0.002)
Married	-0.109***	-0.020***	-0.084***	-0.010***	-0.107***	-0.006***
	(0.016)	(0.003)	(0.019)	(0.002)	(0.025)	(0.001)
Widowed	0.120***	0.022***	0.142***	0.018***	0.109***	0.006***
	(0.021)	(0.004)	(0.024)	(0.003)	(0.032)	(0.002)
Divorced/Separated	0.187***	0.034***	0.212***	0.026***	0.189***	0.011***
	(0.017)	(0.003)	(0.019)	(0.002)	(0.024)	(0.001)
Age 40-44	0.231***	0.042***	0.233***	0.029***	0.179***	0.010***
	(0.017)	(0.003)	(0.020)	(0.003)	(0.029)	(0.002)
Age 45-49	0.192***	0.035***	0.219***	0.027***	0.187***	0.011***
	(0.017)	(0.003)	(0.020)	(0.003)	(0.029)	(0.002)
Age 50-54	0.128***	0.023***	0.133***	0.016***	0.155***	0.009***
	(0.018)	(0.003)	(0.021)	(0.003)	(0.029)	(0.002)
Age 55-59	0.041**	0.008**	0.050**	0.006**	0.076**	0.004**
	(0.018)	(0.003)	(0.021)	(0.003)	(0.030)	(0.002)
Age 65-69	-0.085***	-0.016***	-0.099***	-0.012***	-0.100***	-0.006***
	(0.021)	(0.004)	(0.025)	(0.003)	(0.036)	(0.002)
Age 70-74	-0.097***	-0.018***	-0.167***	-0.021***	-0.219***	-0.012***
	(0.023)	(0.004)	(0.028)	(0.003)	(0.041)	(0.002)
Age 75-79	-0.191***	-0.035***	-0.223***	-0.028***	-0.268***	-0.015***
	(0.025)	(0.005)	(0.031)	(0.004)	(0.045)	(0.003)
Age 80 +	-0.337***	-0.062***	-0.409***	-0.051***	-0.454***	-0.026***
	(0.026)	(0.005)	(0.032)	(0.004)	(0.047)	(0.003)
50-100% Poverty	0.016	0.003	-0.073***	-0.009***	-0.041	-0.002
	(0.026)	(0.005)	(0.026)	(0.003)	(0.031)	(0.002)
100-200% Poverty	-0.242***	-0.044***	-0.321***	-0.040***	-0.295***	-0.017***
	(0.024)	(0.004)	(0.025)	(0.003)	(0.030)	(0.002)
>200% Poverty	-1.007***	-0.184***	-0.980***	-0.121***	-0.886***	-0.050***
	(0.024)	(0.004)	(0.025)	(0.003)	(0.031)	(0.002)
Missing Income	-0.924***	-0.169***	-0.854***	-0.105***	-0.766***	-0.043***
	(0.025)	(0.004)	(0.026)	(0.003)	(0.033)	(0.002)
Homeowner	-0.364***	-0.067***	-0.363***	-0.045***	-0.332***	-0.019***
	(0.011)	(0.002)	(0.012)	(0.002)	(0.017)	(0.001)
Non-Metro	0.011	0.002	-0.003	-0.000	-0.072***	-0.004***
	(0.010)	(0.002)	(0.012)	(0.001)	(0.017)	(0.001)

Table 11 (Continued). Estimated Determinants of Food Insecurity Rates among Persons Age 40 and Older

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Retired	-0.083***	-0.015***	-0.067***	-0.008***	-0.023	-0.001
	(0.015)	(0.003)	(0.019)	(0.002)	(0.027)	(0.002)
Unemployed	0.499***	0.091***	0.490***	0.060***	0.482***	0.027***
	(0.023)	(0.004)	(0.024)	(0.003)	(0.031)	(0.002)
Disabled	0.304***	0.056***	0.331***	0.041***	0.333***	0.019***
	(0.012)	(0.002)	(0.014)	(0.002)	(0.018)	(0.001)
Grandchild Present	0.252***	0.046***	0.206***	0.025***	0.058*	0.003*
	(0.019)	(0.003)	(0.021)	(0.003)	(0.031)	(0.002)
Female	0.017*	0.003*	0.005	0.001	0.005	0.000
	(0.009)	(0.002)	(0.010)	(0.001)	(0.014)	(0.001)
South	0.008	0.001	0.006	0.001	0.009	0.001
	(0.011)	(0.002)	(0.013)	(0.002)	(0.018)	(0.001)
West	0.011	0.002	-0.006	-0.001	-0.011	-0.001
	(0.013)	(0.002)	(0.015)	(0.002)	(0.021)	(0.001)
Northeast	-0.049***	-0.009***	-0.076***	-0.009***	-0.049**	-0.003**
	(0.013)	(0.002)	(0.016)	(0.002)	(0.022)	(0.001)
Livesalone	-0.099***	-0.018***	-0.047***	-0.006***	0.090***	0.005***
	(0.014)	(0.003)	(0.016)	(0.002)	(0.021)	(0.001)
Constant	-0.037		-0.484***		-1.234***	
	(0.035)		(0.040)		(0.053)	
Observations	236997	236997	236997	236997	236997	236997

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 12a. Estimated Determinants of Food Insecurity Rates among Persons Age 50 -59

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.357***	0.064***	0.315***	0.039***	0.161***	0.010***
	-0.026	-0.005	-0.029	-0.004	-0.038	-0.002
Other Race	0.038	0.007	0.081*	0.010*	0.028	0.002
	-0.037	-0.007	-0.042	-0.005	-0.056	-0.003
Hispanic	0.206***	0.037***	0.154***	0.019***	-0.014	-0.001
	-0.029	-0.005	-0.033	-0.004	-0.045	-0.003
High School	-0.198***	-0.035***	-0.215***	-0.026***	-0.149***	-0.009***
	-0.026	-0.005	-0.03	-0.004	-0.039	-0.002
Some College	-0.229***	-0.041***	-0.179***	-0.022***	-0.015	-0.001
	-0.027	-0.005	-0.031	-0.004	-0.041	-0.002
College	-0.523***	-0.093***	-0.456***	-0.056***	-0.281***	-0.017***
	-0.03	-0.005	-0.035	-0.004	-0.047	-0.003
Married	-0.084***	-0.015***	-0.053	-0.006	-0.022	-0.001
	-0.031	-0.005	-0.035	-0.004	-0.045	-0.003
Widowed	0.215***	0.038***	0.243***	0.030***	0.250***	0.015***
	-0.046	-0.008	-0.051	-0.006	-0.063	-0.004
Divorced/Separated	0.190***	0.034***	0.201***	0.025***	0.209***	0.013***
	-0.03	-0.005	-0.034	-0.004	-0.043	-0.003
Age 55-59	-0.088***	-0.016***	-0.087***	-0.011***	-0.081***	-0.005***
	-0.016	-0.003	-0.019	-0.002	-0.026	-0.002
50-100% Poverty	0.073	0.013	0.021	0.003	-0.025	-0.002
	-0.05	-0.009	-0.05	-0.006	-0.057	-0.003
100-200% Poverty	-0.138***	-0.025***	-0.168***	-0.021***	-0.217***	-0.013***
	-0.045	-0.008	-0.047	-0.006	-0.054	-0.003
>200% Poverty	-0.966***	-0.172***	-0.916***	-0.112***	-0.888***	-0.054***
	-0.044	-0.008	-0.047	-0.006	-0.056	-0.003
Missing Income	-0.899***	-0.160***	-0.804***	-0.098***	-0.803***	-0.049***
	-0.046	-0.008	-0.049	-0.006	-0.06	-0.004
Homeowner	-0.404***	-0.072***	-0.394***	-0.048***	-0.356***	-0.022***
	-0.021	-0.004	-0.023	-0.003	-0.03	-0.002
Non-Metro	0.034*	0.006*	0.004	0	-0.003	0
	-0.019	-0.003	-0.023	-0.003	-0.031	-0.002
Retired	-0.130***	-0.023***	-0.107***	-0.013***	-0.127**	-0.008**
	-0.034	-0.006	-0.041	-0.005	-0.06	-0.004
Unemployed	0.539***	0.096***	0.553***	0.068***	0.501***	0.030***
	-0.037	-0.007	-0.041	-0.005	-0.051	-0.003
Disabled	0.336***	0.060***	0.375***	0.046***	0.336***	0.020***
	-0.021	-0.004	-0.024	-0.003	-0.031	-0.002

Table 12a (Continued). Estimated Determinants of Food Insecurity Rates among Persons Age 50 -59

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Grandchild Present	0.254***	0.045***	0.182***	0.022***	0.056	0.003
	-0.034	-0.006	-0.039	-0.005	-0.053	-0.003
Female	0.028*	0.005*	0.028	0.003	0.041	0.002
	-0.016	-0.003	-0.019	-0.002	-0.026	-0.002
South	-0.024	-0.004	-0.051**	-0.006**	-0.054	-0.003
	-0.021	-0.004	-0.025	-0.003	-0.034	-0.002
West	0.036	0.006	0.019	0.002	0.003	0
	-0.023	-0.004	-0.027	-0.003	-0.037	-0.002
Northeast	-0.053**	-0.009**	-0.092***	-0.011***	-0.032	-0.002
	-0.025	-0.004	-0.03	-0.004	-0.04	-0.002
Livesalone	-0.023	-0.004	0.052*	0.006*	0.156***	0.009***
	-0.026	-0.005	-0.029	-0.004	-0.036	-0.002
Constant	0.02		-0.444***		-1.152***	
	-0.062		-0.069		-0.088	
Observations	68198	68198	68198	68198	68198	68198

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12b. Estimated Determinants of Food Insecurity Rates among Persons Age 40 -49

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.300***	0.064***	0.315***	0.039***	0.161***	0.010***
	(0.022)	-0.005	-0.029	-0.004	-0.038	-0.002
Other Race	-0.011	0.007	0.081*	0.010*	0.028	0.002
	(0.030)	-0.007	-0.042	-0.005	-0.056	-0.003
Hispanic	0.183***	0.037***	0.154***	0.019***	-0.014	-0.001
	(0.022)	-0.005	-0.033	-0.004	-0.045	-0.003
High School	-0.165***	-0.035***	-0.215***	-0.026***	-0.149***	-0.009***
	(0.023)	-0.005	-0.03	-0.004	-0.039	-0.002
Some College	-0.219***	-0.041***	-0.179***	-0.022***	-0.015	-0.001
	(0.024)	-0.005	-0.031	-0.004	-0.041	-0.002
College	-0.586***	-0.093***	-0.456***	-0.056***	-0.281***	-0.017***
	(0.026)	-0.005	-0.035	-0.004	-0.047	-0.003
Married	-0.094***	-0.015***	-0.053	-0.006	-0.022	-0.001
	(0.023)	-0.005	-0.035	-0.004	-0.045	-0.003
Widowed	0.145**	0.038***	0.243***	0.030***	0.250***	0.015***
	(0.059)	-0.008	-0.051	-0.006	-0.063	-0.004
Divorced/Separated	0.165***	0.034***	0.201***	0.025***	0.209***	0.013***
	(0.024)	-0.005	-0.034	-0.004	-0.043	-0.003
Age 45-49	-0.035***	-0.016***	-0.087***	-0.011***	-0.081***	-0.005***
	(0.014)	-0.003	-0.019	-0.002	-0.026	-0.002
50-100% Poverty	-0.007	0.013	0.021	0.003	-0.025	-0.002
	(0.042)	-0.009	-0.05	-0.006	-0.057	-0.003
100-200% Poverty	-0.267***	-0.025***	-0.168***	-0.021***	-0.217***	-0.013***
	(0.038)	-0.008	-0.047	-0.006	-0.054	-0.003
>200% Poverty	-1.050***	-0.172***	-0.916***	-0.112***	-0.888***	-0.054***
	(0.037)	-0.008	-0.047	-0.006	-0.056	-0.003
Missing Income	-0.997***	-0.160***	-0.804***	-0.098***	-0.803***	-0.049***
	(0.039)	-0.008	-0.049	-0.006	-0.06	-0.004
Homeowner	-0.362***	-0.072***	-0.394***	-0.048***	-0.356***	-0.022***
	(0.017)	-0.004	-0.023	-0.003	-0.03	-0.002
Non-Metro	0.027	0.006*	0.004	0	-0.003	0
	(0.017)	-0.003	-0.023	-0.003	-0.031	-0.002

Table 12b (Continued). Estimated Determinants of Food Insecurity Rates among Persons Age 40 -49

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Retired	0.457***	-0.023***	-0.107***	0.013***	-0.127**	-0.008**
	(0.126)	-0.006	-0.041	-0.005	-0.06	-0.004
Unemployed	0.443***	0.096***	0.553***	0.068***	0.501***	0.030***
	(0.033)	-0.007	-0.041	-0.005	-0.051	-0.003
Disabled	0.180***	0.060***	0.375***	0.046***	0.336***	0.020***
	(0.019)	-0.004	-0.024	-0.003	-0.031	-0.002
Grandchild Present	0.127***	0.045***	0.182***	0.022***	0.056	0.003
	(0.034)	-0.006	-0.039	-0.005	-0.053	-0.003
Female	0.038***	0.005*	0.028	0.003	0.041	0.002
	(0.014)	-0.003	-0.019	-0.002	-0.026	-0.002
South	-0.007	-0.004	-0.051**	-0.006**	-0.054	-0.003
	(0.018)	-0.004	-0.025	-0.003	-0.034	-0.002
West	-0.021	0.006	0.019	0.002	0.003	0
	(0.020)	-0.004	-0.027	-0.003	-0.037	-0.002
Northeast	-0.051**	-0.009**	-0.092***	-0.011***	-0.032	-0.002
	(0.021)	-0.004	-0.03	-0.004	-0.04	-0.002
Livesalone	-0.099***	-0.004	0.052*	0.006*	0.156***	0.009***
	(0.025)	-0.005	-0.029	-0.004	-0.036	-0.002
Constant	0.290***		-0.444***		-1.152***	
	(0.050)		-0.069		-0.088	
Observations	78117	78117	78117	78117	78117	78117

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12c. Estimated Determinants of Food Insecurity Rates among Persons Age 60 and Older

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.398***	0.063***	0.386***	0.037***	0.193***	0.008***
	(0.023)	(0.004)	(0.027)	(0.003)	(0.037)	(0.002)
Other Race	0.193***	0.031***	0.194***	0.019***	0.086	0.003
	(0.037)	(0.006)	(0.046)	(0.004)	(0.066)	(0.003)
Hispanic	0.261***	0.041***	0.252***	0.024***	0.052	0.002
	(0.028)	(0.004)	(0.033)	(0.003)	(0.049)	(0.002)
High School	-0.230***	-0.037***	-0.196***	-0.019***	-0.169***	-0.007***
	(0.019)	(0.003)	(0.023)	(0.002)	(0.033)	(0.001)
Some College	-0.277***	-0.044***	-0.224***	-0.022***	-0.116***	-0.005***
	(0.022)	(0.004)	(0.027)	(0.003)	(0.039)	(0.002)
College	-0.536***	-0.085***	-0.453***	-0.044***	-0.334***	-0.013***
	(0.026)	(0.004)	(0.034)	(0.003)	(0.053)	(0.002)
Married	-0.179***	-0.028***	-0.173***	-0.017***	-0.163**	-0.007**
	(0.037)	(0.006)	(0.045)	(0.004)	(0.064)	(0.003)
Widowed	0.061	0.010	0.083*	0.008*	0.113*	0.005*
	(0.037)	(0.006)	(0.044)	(0.004)	(0.062)	(0.002)
Divorced/Separated	0.169***	0.027***	0.197***	0.019***	0.248***	0.010***
	(0.038)	(0.006)	(0.044)	(0.004)	(0.061)	(0.002)
Age 65-69	-0.098***	-0.015***	-0.108***	-0.010***	-0.116***	-0.005***
	(0.021)	(0.003)	(0.026)	(0.003)	(0.037)	(0.001)
Age 70-74	-0.110***	-0.017***	-0.172***	-0.017***	-0.233***	-0.009***
	(0.023)	(0.004)	(0.029)	(0.003)	(0.042)	(0.002)
Age 75-79	-0.201***	-0.032***	-0.224***	-0.022***	-0.279***	-0.011***
	(0.025)	(0.004)	(0.032)	(0.003)	(0.046)	(0.002)
Age 80 +	-0.343***	-0.054***	-0.401***	-0.039***	-0.451***	-0.018***
	(0.026)	(0.004)	(0.033)	(0.003)	(0.049)	(0.002)
50-100% Poverty	-0.010	-0.002	-0.084*	-0.008*	-0.022	-0.001
	(0.044)	(0.007)	(0.047)	(0.005)	(0.058)	(0.002)
100-200% Poverty	-0.284***	-0.045***	-0.353***	-0.034***	-0.314***	-0.013***
	(0.042)	(0.007)	(0.045)	(0.004)	(0.057)	(0.002)
>200% Poverty	-1.011***	-0.160***	-0.966***	-0.094***	-0.918***	-0.037***
	(0.042)	(0.007)	(0.047)	(0.005)	(0.062)	(0.003)
Missing Income	-0.875***	-0.139***	-0.781***	-0.076***	-0.718***	-0.029***
	(0.043)	(0.007)	(0.048)	(0.005)	(0.063)	(0.003)
Homeowner	-0.331***	-0.053***	-0.346***	-0.034***	-0.324***	-0.013***
	(0.019)	(0.003)	(0.023)	(0.002)	(0.032)	(0.001)
Non-Metro	-0.022	-0.004	-0.034	-0.003	-0.118***	-0.005***
	(0.017)	(0.003)	(0.021)	(0.002)	(0.031)	(0.001)
Retired	0.035*	0.006*	0.039	0.004	0.097**	0.004**
	(0.021)	(0.003)	(0.026)	(0.003)	(0.040)	(0.002)
Unemployed	0.603***	0.096***	0.595***	0.058***	0.677***	0.027***
	(0.057)	(0.009)	(0.065)	(0.006)	(0.085)	(0.003)
Disabled	0.492***	0.078***	0.460***	0.045***	0.443***	0.018***
	(0.026)	(0.004)	(0.031)	(0.003)	(0.044)	(0.002)

Table 12c (Continued). Estimated Determinants of Food Insecurity Rates among Persons Age 60 and Older

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Grandchild Present	0.351***	0.056***	0.327***	0.032***	0.138**	0.006**
	(0.031)	(0.005)	(0.035)	(0.003)	(0.055)	(0.002)
Female	-0.003	-0.000	-0.052***	-0.005***	-0.073***	-0.003***
	(0.015)	(0.002)	(0.019)	(0.002)	(0.028)	(0.001)
South	0.051***	0.008***	0.062***	0.006**	0.112***	0.004***
	(0.019)	(0.003)	(0.024)	(0.002)	(0.036)	(0.001)
West	0.022	0.004	-0.003	-0.000	0.030	0.001
	(0.022)	(0.004)	(0.028)	(0.003)	(0.042)	(0.002)
Northeast	-0.039*	-0.006*	-0.075***	-0.007***	-0.043	-0.002
	(0.023)	(0.004)	(0.029)	(0.003)	(0.043)	(0.002)
Livesalone	-0.133***	-0.021***	-0.104***	-0.010***	-0.032	-0.001
	(0.022)	(0.004)	(0.027)	(0.003)	(0.039)	(0.002)
Constant	-0.152**		-0.600***		-1.376***	
	(0.063)		(0.073)		(0.101)	
Observations	90682	90682	90682	90682	90682	90682

Source: Authors' calculations from the 2001-2009 December Current Population Survey.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 13. Estimated Determinants of Food Insecurity Rates Among Persons Age 40 and Older and with Income Below 200% of the Poverty Line

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.242***	0.083***	0.222***	0.061***	0.102***	0.015***
	(0.020)	(0.007)	(0.021)	(0.006)	(0.026)	(0.004)
Other Race	-0.049	-0.017	-0.027	-0.007	-0.059	-0.009
	(0.032)	(0.011)	(0.035)	(0.009)	(0.044)	(0.007)
Hispanic	0.097***	0.033***	0.063***	0.017***	-0.121***	-0.018***
	(0.021)	(0.007)	(0.023)	(0.006)	(0.030)	(0.005)
High School	-0.180***	-0.061***	-0.155***	-0.042***	-0.089***	-0.013***
	(0.017)	(0.006)	(0.019)	(0.005)	(0.024)	(0.004)
Some College	-0.143***	-0.049***	-0.084***	-0.023***	0.016	0.002
	(0.020)	(0.007)	(0.022)	(0.006)	(0.028)	(0.004)
College	-0.326***	-0.111***	-0.224***	-0.061***	-0.184***	-0.028***
	(0.028)	(0.009)	(0.032)	(0.009)	(0.041)	(0.006)
Married	-0.000	-0.000	0.041	0.011	-0.024	-0.004
	(0.025)	(0.008)	(0.026)	(0.007)	(0.033)	(0.005)
Widowed	0.135***	0.046***	0.154***	0.042***	0.063	0.009
	(0.029)	(0.010)	(0.032)	(0.009)	(0.040)	(0.006)
Divorced/Separated	0.173***	0.059***	0.209***	0.057***	0.174***	0.026***
	(0.025)	(0.009)	(0.026)	(0.007)	(0.032)	(0.005)
Age 40-44	0.223***	0.076***	0.235***	0.064***	0.172***	0.026***
	(0.029)	(0.010)	(0.031)	(0.009)	(0.040)	(0.006)
Age 45-49	0.178***	0.061***	0.214***	0.058***	0.177***	0.027***
	(0.030)	(0.010)	(0.032)	(0.009)	(0.040)	(0.006)
Age 50-54	0.140***	0.048***	0.161***	0.044***	0.185***	0.028***
	(0.030)	(0.010)	(0.032)	(0.009)	(0.040)	(0.006)
Age 55-59	0.086***	0.029***	0.099***	0.027***	0.118***	0.018***
	(0.030)	(0.010)	(0.033)	(0.009)	(0.042)	(0.006)
Age 65-69	-0.089***	-0.030***	-0.100***	-0.027***	-0.051	-0.008
	(0.032)	(0.011)	(0.035)	(0.010)	(0.047)	(0.007)
Age 70-74	-0.140***	-0.048***	-0.196***	-0.054***	-0.193***	-0.029***
	(0.033)	(0.011)	(0.038)	(0.010)	(0.052)	(0.008)
Age 75-79	-0.227***	-0.077***	-0.277***	-0.076***	-0.274***	-0.041***
	(0.035)	(0.012)	(0.040)	(0.011)	(0.056)	(0.008)
Age 80 +	-0.393***	-0.134***	-0.476***	-0.130***	-0.435***	-0.065***
	(0.035)	(0.012)	(0.041)	(0.011)	(0.058)	(0.009)
50-100% Poverty	0.012	0.004	-0.078***	-0.021***	-0.057*	-0.008*
	(0.025)	(0.009)	(0.026)	(0.007)	(0.030)	(0.005)

Table 13 (Continued). Estimated Determinants of Food Insecurity Rates Among Persons Age 40 and Older and with Income Below 200% of the Poverty Line

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
100-200% Poverty	-0.300***	-0.102***	-0.379***	-0.104***	-0.357***	-0.053***
	(0.024)	(0.008)	(0.025)	(0.007)	(0.030)	(0.004)
Homeowner	-0.298***	-0.102***	-0.313***	-0.086***	-0.271***	-0.040***
	(0.015)	(0.005)	(0.017)	(0.005)	(0.021)	(0.003)
Non-Metro	-0.059***	-0.020***	-0.033*	-0.009*	-0.107***	-0.016***
	(0.016)	(0.005)	(0.017)	(0.005)	(0.022)	(0.003)
Retired	-0.104***	-0.035***	-0.072***	-0.020***	-0.044	-0.007
	(0.024)	(0.008)	(0.027)	(0.007)	(0.036)	(0.005)
Unemployed	0.413***	0.141***	0.390***	0.107***	0.367***	0.055***
	(0.034)	(0.012)	(0.034)	(0.009)	(0.040)	(0.006)
Disabled	0.293***	0.100***	0.308***	0.084***	0.303***	0.045***
	(0.018)	(0.006)	(0.019)	(0.005)	(0.024)	(0.004)
Grandchild Present	0.190***	0.065***	0.173***	0.047***	0.004	0.001
	(0.026)	(0.009)	(0.028)	(0.008)	(0.038)	(0.006)
Female	0.023	0.008	0.015	0.004	0.010	0.001
	(0.015)	(0.005)	(0.016)	(0.004)	(0.020)	(0.003)
South	0.040**	0.014**	0.035*	0.009*	0.015	0.002
	(0.018)	(0.006)	(0.020)	(0.005)	(0.025)	(0.004)
West	0.034	0.011	0.017	0.005	-0.014	-0.002
	(0.021)	(0.007)	(0.023)	(0.006)	(0.030)	(0.004)
Northeast	-0.053**	-0.018**	-0.076***	-0.021***	-0.085***	-0.013***
	(0.022)	(0.008)	(0.025)	(0.007)	(0.032)	(0.005)
Livesalone	-0.095***	-0.032***	-0.034	-0.009	0.118***	0.018***
	(0.020)	(0.007)	(0.022)	(0.006)	(0.027)	(0.004)
Constant	-0.098**		-0.568***		-1.272***	
	(0.049)		(0.052)		(0.066)	
Observations	52580	52580	52580	52580	52580	52580

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14a. Estimated Determinants of Food Insecurity Rates Among Americans Age 50-59 and <200% Poverty

	Marginal Food Insecurity		Food Insecurity		Very Low Food Security	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.223***	0.082***	0.170***	0.055***	0.080	0.016
	(0.041)	(0.015)	(0.042)	(0.013)	(0.049)	(0.010)
Other Race	-0.094	-0.035	-0.038	-0.012	-0.166**	-0.033**
	(0.060)	(0.022)	(0.064)	(0.021)	(0.078)	(0.015)
Hispanic	0.086**	0.032**	0.012	0.004	-0.058	-0.011
	(0.044)	(0.016)	(0.046)	(0.015)	(0.059)	(0.012)
High School	-0.121***	-0.044***	-0.129***	-0.042***	-0.066	-0.013
	(0.037)	(0.014)	(0.039)	(0.013)	(0.049)	(0.010)
Some College	-0.066	-0.024	-0.001	-0.000	0.138***	0.027***
	(0.042)	(0.016)	(0.044)	(0.014)	(0.053)	(0.010)
College	-0.288***	-0.106***	-0.200***	-0.065***	-0.104	-0.021
	(0.054)	(0.020)	(0.059)	(0.019)	(0.071)	(0.014)
Married	0.071	0.026	0.076	0.025	0.042	0.008
	(0.047)	(0.017)	(0.050)	(0.016)	(0.060)	(0.012)
Widowed	0.254***	0.093***	0.301***	0.097***	0.191**	0.038**
	(0.067)	(0.024)	(0.069)	(0.022)	(0.080)	(0.016)
Divorced/Separated	0.181***	0.067***	0.201***	0.065***	0.187***	0.037***
	(0.046)	(0.017)	(0.047)	(0.015)	(0.056)	(0.011)
Age 55-59	-0.057**	-0.021**	-0.068**	-0.022**	-0.069*	-0.014*
	(0.029)	(0.011)	(0.031)	(0.010)	(0.037)	(0.007)
50-100% Poverty	0.053	0.019	0.003	0.001	-0.041	-0.008
	(0.048)	(0.018)	(0.049)	(0.016)	(0.057)	(0.011)
100-200% Poverty	-0.215***	-0.079***	-0.250***	-0.081***	-0.288***	-0.057***
	(0.045)	(0.017)	(0.047)	(0.015)	(0.054)	(0.011)
Homeowner	-0.328***	-0.121***	-0.335***	-0.108***	-0.270***	-0.053***
	(0.031)	(0.011)	(0.033)	(0.010)	(0.040)	(0.008)
Non-Metro	-0.082**	-0.030**	-0.068*	-0.022*	-0.069	-0.014
	(0.033)	(0.012)	(0.035)	(0.011)	(0.043)	(0.009)
Retired	-0.167***	-0.062***	-0.119*	-0.039*	-0.096	-0.019
	(0.057)	(0.021)	(0.064)	(0.021)	(0.080)	(0.016)
Unemployed	0.443***	0.163***	0.468***	0.152***	0.423***	0.084***
	(0.060)	(0.022)	(0.061)	(0.019)	(0.071)	(0.014)
Disabled	0.309***	0.114***	0.310***	0.100***	0.291***	0.058***
	(0.032)	(0.012)	(0.034)	(0.011)	(0.041)	(0.008)
Grandchild Present	0.172***	0.063***	0.126**	0.041**	-0.037	-0.007
	(0.048)	(0.018)	(0.049)	(0.016)	(0.064)	(0.013)

Table 14a (Continued). Estimated Determinants of Food Insecurity Rates Among Americans Age 50-59 and <200% Poverty

	Marginal Food Insecurity		Food Insecurity		Very Low Food Security	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Female	0.061**	0.022**	0.066**	0.021**	0.061	0.012
	(0.029)	(0.011)	(0.031)	(0.010)	(0.037)	(0.007)
South	-0.007	-0.003	-0.043	-0.014	-0.020	-0.004
	(0.038)	(0.014)	(0.040)	(0.013)	(0.048)	(0.009)
West	0.033	0.012	0.012	0.004	-0.028	-0.006
	(0.044)	(0.016)	(0.046)	(0.015)	(0.056)	(0.011)
Northeast	-0.059	-0.022	-0.135***	-0.044***	-0.072	-0.014
	(0.047)	(0.017)	(0.051)	(0.017)	(0.061)	(0.012)
Livesalone	-0.000	-0.000	0.037	0.012	0.164***	0.032***
	(0.040)	(0.015)	(0.041)	(0.013)	(0.048)	(0.010)
Constant	-0.079		-0.553***		-1.215***	
	(0.084)		(0.089)		(0.111)	
Observations	11249	11249	11249	11249	11249	11249

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14b. Estimated Determinants of Food Insecurity Rates Among Americans Age 40-49 and <200% Poverty

	Marginal Food Insecurity		Food Insecurity		Very Low Food Security	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.141***	0.053***	0.116***	0.039***	0.038	0.007
	(0.036)	(0.013)	(0.036)	(0.012)	(0.044)	(0.008)
Other Race	-0.115**	-0.043**	-0.087	-0.029	-0.048	-0.009
	(0.052)	(0.019)	(0.054)	(0.018)	(0.066)	(0.012)
Hispanic	0.073**	0.027**	0.048	0.016	-0.162***	-0.030***
	(0.034)	(0.013)	(0.035)	(0.012)	(0.045)	(0.008)
High School	-0.108***	-0.040***	-0.108***	-0.036***	0.002	0.000
	(0.032)	(0.012)	(0.033)	(0.011)	(0.040)	(0.008)
Some College	-0.108***	-0.040***	-0.094**	-0.031**	0.010	0.002
	(0.036)	(0.013)	(0.037)	(0.012)	(0.046)	(0.009)
College	-0.328***	-0.123***	-0.278***	-0.093***	-0.238***	-0.045***
	(0.048)	(0.018)	(0.052)	(0.018)	(0.068)	(0.013)
Married	-0.005	-0.002	0.038	0.013	-0.042	-0.008
	(0.036)	(0.014)	(0.037)	(0.012)	(0.047)	(0.009)
Widowed	0.105	0.039	0.106	0.035	0.152	0.029
	(0.083)	(0.031)	(0.084)	(0.028)	(0.099)	(0.019)
Divorced/Separated	0.134***	0.050***	0.181***	0.061***	0.143***	0.027***
	(0.038)	(0.014)	(0.038)	(0.013)	(0.046)	(0.009)
Age 45-49	-0.033	-0.012	-0.012	-0.004	0.002	0.000
	(0.024)	(0.009)	(0.025)	(0.009)	(0.032)	(0.006)
50-100% Poverty	-0.024	-0.009	-0.144***	-0.048***	-0.102**	-0.019**
	(0.041)	(0.015)	(0.041)	(0.014)	(0.047)	(0.009)
100-200% Poverty	-0.339***	-0.127***	-0.452***	-0.152***	-0.397***	-0.075***
	(0.038)	(0.014)	(0.039)	(0.013)	(0.046)	(0.009)
Homeowner	-0.282***	-0.105***	-0.282***	-0.095***	-0.254***	-0.048***
	(0.026)	(0.010)	(0.027)	(0.009)	(0.033)	(0.006)
Non-Metro	-0.048*	-0.018*	-0.002	-0.001	-0.117***	-0.022***
	(0.029)	(0.011)	(0.030)	(0.010)	(0.037)	(0.007)
Retired	-0.615**	-0.230**	-0.397	-0.133	-1.553***	-0.292***
	(0.246)	(0.092)	(0.251)	(0.084)	(0.352)	(0.067)
Unemployed	0.346***	0.129***	0.315***	0.106***	0.286***	0.054***
	(0.047)	(0.017)	(0.047)	(0.016)	(0.055)	(0.010)
Disabled	0.180***	0.067***	0.229***	0.077***	0.261***	0.049***
	(0.028)	(0.011)	(0.029)	(0.010)	(0.036)	(0.007)
Grandchild Present	0.016	0.006	0.000	0.000	-0.147**	-0.028**
	(0.046)	(0.017)	(0.047)	(0.016)	(0.064)	(0.012)
Female	0.070***	0.026***	0.079***	0.027***	0.083**	0.016**
	(0.025)	(0.009)	(0.026)	(0.009)	(0.033)	(0.006)
South	0.054*	0.020*	0.016	0.005	-0.085**	-0.016**
	(0.032)	(0.012)	(0.034)	(0.011)	(0.042)	(0.008)

Table 14b (Continued). Estimated Determinants of Food Insecurity Rates Among Americans Age 40-49 and <200% Poverty

	Marginal Food Insecurity		Food Insecurity		Very Low Food Security	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
West	0.005	0.002	-0.021	-0.007	-0.098**	-0.019**
	(0.037)	(0.014)	(0.038)	(0.013)	(0.047)	(0.009)
Northeast	-0.049	-0.018	-0.073*	-0.024*	-0.112**	-0.021**
	(0.040)	(0.015)	(0.042)	(0.014)	(0.051)	(0.010)
Lives alone	-0.065	-0.024	0.017	0.006	0.276***	0.052***
	(0.042)	(0.016)	(0.042)	(0.014)	(0.047)	(0.009)
Constant	0.159**		-0.213***		-0.982***	
	(0.069)		(0.070)		(0.086)	
Observations	15469	15469	15469	15469	15469	15469

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 14c. Estimated Determinants of Food Insecurity Rates Among Persons Age 60 and Older and with Income Below 200% of the Poverty Line

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
African American	0.309***	0.094***	0.333***	0.069***	0.167***	0.016***
	(0.031)	(0.009)	(0.034)	(0.007)	(0.044)	(0.004)
Other Race	0.013	0.004	0.023	0.005	-0.006	-0.001
	(0.053)	(0.016)	(0.063)	(0.013)	(0.082)	(0.008)
Hispanic	0.122***	0.037***	0.113***	0.023***	-0.108*	-0.011*
	(0.036)	(0.011)	(0.041)	(0.008)	(0.057)	(0.006)
High School	-0.234***	-0.071***	-0.193***	-0.040***	-0.171***	-0.017***
	(0.024)	(0.007)	(0.028)	(0.006)	(0.039)	(0.004)
Some College	-0.193***	-0.059***	-0.127***	-0.026***	-0.068	-0.007
	(0.032)	(0.010)	(0.037)	(0.008)	(0.049)	(0.005)
College	-0.316***	-0.096***	-0.166***	-0.034***	-0.163**	-0.016**
	(0.045)	(0.014)	(0.054)	(0.011)	(0.074)	(0.007)
Married	-0.095*	-0.029*	-0.028	-0.006	-0.047	-0.005
	(0.050)	(0.015)	(0.058)	(0.012)	(0.075)	(0.007)
Widowed	0.083*	0.025*	0.114**	0.023**	0.081	0.008
	(0.049)	(0.015)	(0.056)	(0.011)	(0.073)	(0.007)
Divorced/Separated	0.162***	0.049***	0.208***	0.043***	0.239***	0.024***
	(0.050)	(0.015)	(0.057)	(0.012)	(0.073)	(0.007)
Age 65-69	-0.096***	-0.029***	-0.109***	-0.022***	-0.059	-0.006
	(0.032)	(0.010)	(0.036)	(0.007)	(0.048)	(0.005)
Age 70-74	-0.146***	-0.044***	-0.201***	-0.041***	-0.199***	-0.020***
	(0.034)	(0.010)	(0.039)	(0.008)	(0.053)	(0.005)
Age 75-79	-0.230***	-0.070***	-0.273***	-0.056***	-0.272***	-0.027***
	(0.036)	(0.011)	(0.042)	(0.009)	(0.058)	(0.006)
Age 80 +	-0.396***	-0.120***	-0.466***	-0.096***	-0.418***	-0.041***
	(0.036)	(0.011)	(0.043)	(0.009)	(0.060)	(0.006)
50-100% Poverty	-0.011	-0.003	-0.085*	-0.018*	-0.028	-0.003
	(0.043)	(0.013)	(0.046)	(0.009)	(0.058)	(0.006)
100-200% Poverty	-0.332***	-0.101***	-0.394***	-0.081***	-0.359***	-0.035***
	(0.041)	(0.012)	(0.045)	(0.009)	(0.057)	(0.006)
Homeowner	-0.286***	-0.087***	-0.325***	-0.067***	-0.287***	-0.028***
	(0.024)	(0.007)	(0.028)	(0.006)	(0.037)	(0.004)
Non-Metro	-0.060***	-0.018***	-0.043	-0.009	-0.138***	-0.014***
	(0.023)	(0.007)	(0.027)	(0.006)	(0.038)	(0.004)
Retired	0.067**	0.020**	0.095**	0.019**	0.119**	0.012**
	(0.034)	(0.010)	(0.040)	(0.008)	(0.057)	(0.006)
Unemployed	0.625***	0.190***	0.584***	0.120***	0.603***	0.060***
	(0.089)	(0.027)	(0.094)	(0.019)	(0.113)	(0.011)
Disabled	0.513***	0.156***	0.501***	0.103***	0.458***	0.045***
	(0.039)	(0.012)	(0.044)	(0.009)	(0.060)	(0.006)

Table 14c (Continued). Estimated Determinants of Food Insecurity Rates Among Persons Age 60 and Older and with Income Below 200% of the Poverty Line

	Marginal Food Insecurity		Food Insecurity		Very Low Food Secure	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects	Coefficients	Marginal Effects
Grandchild Present	0.326***	0.099***	0.347***	0.071***	0.159**	0.016**
	(0.042)	(0.013)	(0.046)	(0.009)	(0.066)	(0.007)
Female	-0.022	-0.007	-0.067**	-0.014**	-0.094***	-0.009***
	(0.023)	(0.007)	(0.026)	(0.005)	(0.036)	(0.004)
South	0.059**	0.018**	0.115***	0.024***	0.171***	0.017***
	(0.027)	(0.008)	(0.032)	(0.007)	(0.044)	(0.004)
West	0.055*	0.017*	0.054	0.011	0.104*	0.010*
	(0.033)	(0.010)	(0.039)	(0.008)	(0.053)	(0.005)
Northeast	-0.048	-0.015	-0.032	-0.007	-0.041	-0.004
	(0.033)	(0.010)	(0.040)	(0.008)	(0.055)	(0.005)
Livesalone	-0.150***	-0.046***	-0.086**	-0.018**	-0.004	-0.000
	(0.031)	(0.009)	(0.035)	(0.007)	(0.047)	(0.005)
Constant	-0.134*		-0.674***		-1.481***	
	(0.078)		(0.090)		(0.121)	
Observations	25862	25862	25862	25862	25862	25862

Source: Authors' calculations from the 2001-2009 December Current Population Survey. Robust standard errors in parentheses.

Table 15: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,138.76	2,045.07
Protein (gm)	82.45	77.33
Vitamin A (mcg)	624.96	499.49**
Vitamin C (mg)	89.80	80.71
Thiamin (mg)	1.64	1.48**
Riboflavin (mg)	2.22	2.11
Vitamin B6 (mg)	1.93	1.74*
Calcium (mg)	867.26	796.24*
Phosphorous (mg)	1,330.75	1,239.58*
Magnesium (mg)	299.23	268.43**
Iron (mg)	15.58	13.64**
Diabetic (%)	0.10	0.19**
Self-Reports of General Health		
Excellent (%)	0.12	0.02**
Excellent or very good (%)	0.44	0.17**
Excellent, very good, or good	0.78	0.48**
Suffers from depression (%)	0.03	0.16**
At least one ADL limitation (%)	0.21	0.52**

Notes: Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 16: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of less than 200% of poverty line

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,984.23	1,983.41
Protein (gm)	76.41	74.74
Vitamin A (mcg)	529.78	494.09
Vitamin C (mg)	80.53	74.47
Thiamin (mg)	1.49	1.44
Riboflavin (mg)	1.99	2.09
Vitamin B6 (mg)	1.72	1.70
Calcium (mg)	811.45	791.60
Phosphorous (mg)	1,236.15	1,211.66
Magnesium (mg)	270.65	257.46
Iron (mg)	14.08	13.54
Diabetic (%)	0.16	0.20
Self-Reports of General Health		
Excellent (%)	0.06	0.03*
Excellent or very good (%)	0.24	0.16*
Excellent, very good, or good	0.58	0.47**
Suffers from depression (%)	0.08	0.18**
At least one ADL limitation (%)	0.40	0.57**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 17: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Married Sample

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,150.64	2,005.40
Protein (gm)	83.51	80.97
Vitamin A (mcg)	620.95	501.58
Vitamin C (mg)	88.36	89.88
Thiamin (mg)	1.66	1.56
Riboflavin (mg)	2.26	2.12
Vitamin B6 (mg)	1.95	1.76
Calcium (mg)	874.43	765.08*
Phosphorous (mg)	1,347.78	1,258.38
Magnesium (mg)	302.24	274.01
Iron (mg)	15.89	14.31
Diabetic (%)	0.09	0.24**
Self-Reports of General Health		
Excellent (%)	0.12	0.02**
Excellent or very good (%)	0.45	0.19**
Excellent, very good, or good	0.79	0.47**
Suffers from depression (%)	0.02	0.09**
At least one ADL limitation (%)	0.20	0.46**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 18: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of not married not widowed

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,126.42	2,089.30
Protein (gm)	80.23	76.82
Vitamin A (mcg)	638.12	510.45**
Vitamin C (mg)	92.34	74.23*
Thiamin (mg)	1.60	1.43*
Riboflavin (mg)	2.16	2.13
Vitamin B6 (mg)	1.89	1.74
Calcium (mg)	859.11	837.04
Phosphorous (mg)	1,291.37	1,255.50
Magnesium (mg)	292.41	272.05
Iron (mg)	14.97	13.24**
Diabetic (%)	0.11	0.15
Self-Reports of General Health		
Excellent (%)	0.11	0.02**
Excellent or very good (%)	0.42	0.15**
Excellent, very good, or good	0.76	0.50**
Suffers from depression (%)	0.06	0.20**
At least one ADL limitation (%)	0.26	0.57**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 19: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of less than 100% of poverty line

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,017.80	1,934.15
Protein (gm)	76.35	74.21
Vitamin A (mcg)	545.68	509.56
Vitamin C (mg)	82.55	74.27
Thiamin (mg)	1.48	1.44
Riboflavin (mg)	1.96	2.11
Vitamin B6 (mg)	1.71	1.66
Calcium (mg)	758.15	758.75
Phosphorous (mg)	1,205.12	1,150.79
Magnesium (mg)	268.66	244.43
Iron (mg)	14.00	13.67
Diabetic (%)	0.17	0.24
Self-Reports of General Health		
Excellent (%)	0.06	0.01*
Excellent or very good (%)	0.27	0.09**
Excellent, very good, or good	0.59	0.41**
Suffers from depression (%)	0.15	0.22
At least one ADL limitation (%)	0.47	0.65**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 20: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample between 100% and 200% of poverty line

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,966.25	2,027.81
Protein (gm)	76.44	75.22
Vitamin A (mcg)	521.83	482.04
Vitamin C (mg)	79.45	74.66
Thiamin (mg)	1.49	1.44
Riboflavin (mg)	2.01	2.07
Vitamin B6 (mg)	1.72	1.74
Calcium (mg)	840.01	821.21
Phosphorous (mg)	1,252.78	1,266.51
Magnesium (mg)	271.72	269.21
Iron (mg)	14.12	13.41
Diabetic (%)	0.16	0.15
Self-Reports of General Health		
Excellent (%)	0.06	0.04
Excellent or very good (%)	0.23	0.21
Excellent, very good, or good	0.57	0.51
Suffers from depression (%)	0.05	0.14**
At least one ADL limitation (%)	0.36	0.49*

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 21: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of 200% of poverty line or more

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,169.75	2,229.78
Protein (gm)	83.66	85.08
Vitamin A (mcg)	643.35	516.17*
Vitamin C (mg)	91.66	99.40
Thiamin (mg)	1.67	1.61
Riboflavin (mg)	2.27	2.18
Vitamin B6 (mg)	1.97	1.86
Calcium (mg)	878.45	810.12
Phosphorous (mg)	1,349.72	1,323.22
Magnesium (mg)	304.96	301.30
Iron (mg)	15.88	13.95
Diabetic (%)	0.09	0.16
Self-Reports of General Health		
Excellent (%)	0.13	0.00**
Excellent or very good (%)	0.49	0.23**
Excellent, very good, or good	0.82	0.54**
Suffers from depression (%)	0.02	0.09
At least one ADL limitation (%)	0.18	0.37**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 22: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, ample of female

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,773.82	1,734.81
Protein (gm)	68.94	64.41
Vitamin A (mcg)	586.55	451.73**
Vitamin C (mg)	83.97	78.18
Thiamin (mg)	1.42	1.26*
Riboflavin (mg)	1.93	1.83
Vitamin B6 (mg)	1.64	1.50
Calcium (mg)	781.49	761.69
Phosphorous (mg)	1,137.11	1,095.47
Magnesium (mg)	261.50	236.66*
Iron (mg)	13.47	11.83**
Diabetic (%)	0.10	0.18**
Self-Reports of General Health		
Excellent (%)	0.12	0.02**
Excellent or very good (%)	0.44	0.17**
Excellent, very good, or good	0.77	0.48**
Suffers from depression (%)	0.03	0.18**
At least one ADL limitation (%)	0.23	0.51**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self R ports of General Health reported for 2001-2008.

Table 23: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of male

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,512.07	2,412.57
Protein (gm)	96.27	92.63
Vitamin A (mcg)	664.37	550.81
Vitamin C (mg)	95.76	83.71
Thiamin (mg)	1.87	1.74
Riboflavin (mg)	2.52	2.44
Vitamin B6 (mg)	2.22	2.03
Calcium (mg)	954.99	837.16*
Phosphorous (mg)	1,528.83	1,410.27
Magnesium (mg)	337.82	306.07*
Iron (mg)	17.74	15.79*
Diabetic (%)	0.10	0.19**
Self-Reports of General Health		
Excellent (%)	0.13	0.02**
Excellent or very good (%)	0.45	0.18**
Excellent, very good, or good	0.80	0.49**
Suffers from depression (%)	0.03	0.13**
At least one ADL limitation (%)	0.20	0.53**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 24: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of black

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,968.25	2,094.31
Protein (gm)	73.32	73.80
Vitamin A (mcg)	600.17	463.98
Vitamin C (mg)	90.67	70.26*
Thiamin (mg)	1.34	1.43
Riboflavin (mg)	1.71	1.78
Vitamin B6 (mg)	1.65	1.69
Calcium (mg)	651.86	670.96
Phosphorous (mg)	1,079.61	1,109.37
Magnesium (mg)	241.24	238.21
Iron (mg)	12.96	13.92
Diabetic (%)	0.20	0.25
Self-Reports of General Health		
Excellent (%)	0.07	0.01**
Excellent or very good (%)	0.27	0.18
Excellent, very good, or good	0.66	0.43**
Suffers from depression (%)	0.04	0.16**
At least one ADL limitation (%)	0.26	0.47**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 25: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of Hispanic

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,985.38	1,850.96
Protein (gm)	80.50	73.49
Vitamin A (mcg)	513.15	430.27
Vitamin C (mg)	92.36	105.57
Thiamin (mg)	1.57	1.46
Riboflavin (mg)	2.02	1.78*
Vitamin B6 (mg)	1.85	1.69
Calcium (mg)	836.53	759.56
Phosphorous (mg)	1,274.85	1,206.94
Magnesium (mg)	286.86	278.77
Iron (mg)	14.55	14.12
Diabetic (%)	0.17	0.19
Self-Reports of General Health		
Excellent (%)	0.12	0.03**
Excellent or very good (%)	0.28	0.14**
Excellent, very good, or good	0.60	0.44*
Suffers from depression (%)	0.06	0.12
At least one ADL limitation (%)	0.21	0.29

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 26: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of white

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,191.05	2,144.98
Protein (gm)	83.85	81.49
Vitamin A (mcg)	645.91	542.59
Vitamin C (mg)	90.21	70.86*
Thiamin (mg)	1.68	1.53
Riboflavin (mg)	2.33	2.44
Vitamin B6 (mg)	1.98	1.78
Calcium (mg)	906.49	894.23
Phosphorous (mg)	1,374.92	1,334.97
Magnesium (mg)	308.22	277.77*
Iron (mg)	16.06	13.55**
Diabetic (%)	0.08	0.15*
Self-Reports of General Health		
Excellent (%)	0.13	0.02**
Excellent or very good (%)	0.50	0.19**
Excellent, very good, or good	0.82	0.52**
Suffers from depression (%)	0.03	0.16**
At least one ADL limitation (%)	0.20	0.64**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 27: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of high school graduates

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,171.28	2,161.38
Protein (gm)	83.97	77.95
Vitamin A (mcg)	645.99	530.41*
Vitamin C (mg)	91.77	76.63
Thiamin (mg)	1.66	1.51
Riboflavin (mg)	2.31	2.26
Vitamin B6 (mg)	1.98	1.84
Calcium (mg)	901.28	822.03
Phosphorous (mg)	1,361.39	1,279.99
Magnesium (mg)	306.53	283.44
Iron (mg)	15.82	14.21*
Diabetic (%)	0.09	0.18**
Self-Reports of General Health		
Excellent (%)	0.13	0.02**
Excellent or very good (%)	0.48	0.20**
Excellent, very good, or good	0.82	0.58**
Suffers from depression (%)	0.03	0.18**
At least one ADL limitation (%)	0.20	0.56**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Reported for waves 2001-2008.

Table 28: Health Outcomes by Food Insecurity Status for Individuals Ages 50-59, Sample of non-high school graduates

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,908.90	1,811.53
Protein (gm)	72.34	71.53
Vitamin A (mcg)	482.37	446.13
Vitamin C (mg)	65.49	76.88
Thiamin (mg)	1.48	1.32*
Riboflavin (mg)	1.99	1.89
Vitamin B6 (mg)	1.62	1.50
Calcium (mg)	718.83	735.55
Phosphorous (mg)	1,159.93	1,148.74
Magnesium (mg)	255.67	239.93
Iron (mg)	13.81	12.09*
Diabetic (%)	0.20	0.21
Self-Reports of General Health		
Excellent (%)	0.06	0.02*
Excellent or very good (%)	0.20	0.13
Excellent, very good, or good	0.56	0.32**
Suffers from depression (%)	0.05	0.08
At least one ADL limitation (%)	0.32	0.50**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Reported for waves 2001-2008.

Table 29: Health Outcomes by Food Insecurity Status for Individuals Ages 40-49

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	2,303.99	2,347.20
Protein (gm)	86.99	83.12
Vitamin A (mcg)	621.09	573.30
Vitamin C (mg)	85.73	84.94
Thiamin (mg)	1.68	1.54**
Riboflavin (mg)	2.30	2.14*
Vitamin B6 (mg)	1.95	1.89
Calcium (mg)	918.62	859.88
Phosphorous (mg)	1,398.38	1,334.10
Magnesium (mg)	306.66	284.12**
Iron (mg)	15.95	14.68*
Diabetic (%)	0.05	0.09**
Self-Reports of General Health		
Excellent (%)	0.12	0.03**
Excellent or very good (%)	0.48	0.21**
Excellent, very good, or good	0.81	0.57**
Suffers from depression (%)	0.03	0.17**
At least one ADL limitation (%)	0.16	0.40**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 30: Health Outcomes by Food Insecurity Status for Individuals Ages 60 and Older

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,776.55	1,566.84**
Protein (gm)	69.10	61.17**
Vitamin A (mcg)	657.44	536.19**
Vitamin C (mg)	90.57	70.31**
Thiamin (mg)	1.49	1.3**
Riboflavin (mg)	2.02	1.77**
Vitamin B6 (mg)	1.77	1.5**
Calcium (mg)	779.48	678.06**
Phosphorous (mg)	1,145.48	1,005.11**
Magnesium (mg)	265.77	227.82**
Iron (mg)	14.63	12.79**
Diabetic (%)	0.16	0.26**
Self-Reports of General Health		
Excellent (%)	0.09	0.03**
Excellent or very good (%)	0.38	0.13**
Excellent, very good, or good	0.73	0.44**
Suffers from depression (%)	0.03	0.11**
At least one ADL limitation (%)	0.65	0.88**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 31: Health Outcomes by Food Insecurity Status for Individuals Ages 40-49, Sample of less than 200% of poverty line

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,869.56	2,024.09
Protein (gm)	71.18	74.55
Vitamin A (mcg)	592.00	527.53
Vitamin C (mg)	80.87	79.23
Thiamin (mg)	1.44	1.44
Riboflavin (mg)	1.97	2.02
Vitamin B6 (mg)	1.68	1.68
Calcium (mg)	768.03	793.54
Phosphorous (mg)	1,157.82	1,206.94
Magnesium (mg)	257.03	259.26
Iron (mg)	13.88	13.83
Diabetic (%)	0.15	0.17
Self-Reports of General Health		
Excellent (%)	0.05	0.03*
Excellent or very good (%)	0.26	0.15**
Excellent, very good, or good	0.62	0.48**
Suffers from depression (%)	0.05	0.16**
At least one ADL limitation (%)	0.53	0.59**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 32: Health Outcomes by Food Insecurity Status for Individuals Ages 60 and Above, Sample of less than 200% of poverty line

	Food Secure	Food Insecure
	(1)	(2)
Nutrient Intakes		
Energy Intake (kcal)	1,648.17	1,539.16*
Protein (gm)	63.32	60.20
Vitamin A (mcg)	613.58	531.8*
Vitamin C (mg)	79.63	71.82
Thiamin (mg)	1.38	1.29
Riboflavin (mg)	1.88	1.76
Vitamin B6 (mg)	1.59	1.46
Calcium (mg)	719.45	676.83
Phosphorous (mg)	1,053.88	991.00
Magnesium (mg)	239.77	222.33*
Iron (mg)	13.48	12.49
Diabetic (%)	0.19	0.28**
Self-Reports of General Health		
Excellent (%)	0.05	0.03
Excellent or very good (%)	0.27	0.12**
Excellent, very good, or good	0.61	0.42**
Suffers from depression (%)	0.04	0.10**
At least one ADL limitation (%)	0.72	0.87**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Food Secure is defined as 2 or fewer affirmative responses in the Core Food Security Module; food insecure is defined as 3 or more affirmative responses. *Different from column (1), $p \leq 0.05$. ** Different from column (1), $p \leq 0.01$. Vitamin A and Self-Reports of General Health reported for 2001-2008.

Table 33: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 50-59

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	37.761	1.395	-30.448	-1.537	-0.032	0.030
	(53.096)	(2.270)	(43.042)	(5.695)	(0.051)	(0.065)
Not married or widowed	98.807	1.413	44.330	1.914	-0.002	0.032
	(38.391)*	(1.641)	(31.099)	(4.117)	(0.037)	(0.047)
Widowed	54.722	-1.627	88.724	1.492	-0.078	-0.022
	(87.316)	(3.732)	(73.167)	(9.365)	(0.084)	(0.106)
Income/Poverty line	44.822	2.146	41.927	4.385	0.026	0.036
	(11.800)**	(0.504)**	(9.664)**	(1.266)**	(0.011)*	(0.014)*
Female	-705.367	-27.004	-76.726	-10.118	-0.455	-0.561
	(33.544)**	(1.434)**	(27.384)**	(3.598)**	(0.032)**	(0.041)**
Black	-115.650	-5.947	-17.517	5.070	-0.235	-0.522
	(44.619)**	(1.907)**	(35.899)	(4.785)	(0.043)**	(0.054)**
Hispanic	-82.968	0.274	-45.789	19.243	-0.046	-0.231
	(45.835)	(1.959)	(37.782)	(4.916)**	(0.044)	(0.056)**
Other	-163.574	-0.782	-63.200	2.338	-0.001	-0.373
	(81.269)*	(3.474)	(66.190)	(8.716)	(0.079)	(0.099)**
High School graduate	165.881	6.040	89.898	14.835	0.131	0.226
	(43.453)**	(1.857)**	(36.103)*	(4.660)**	(0.042)**	(0.053)**
Age	-21.057	-0.831	1.469	0.512	-0.008	-0.009
	(5.921)**	(0.253)**	(4.827)	(0.635)	(0.006)	(0.007)
Constant	3322.694	128.064	352.703	36.214	2.131	2.746
	(326.747)**	(13.966)**	(266.332)	(35.044)	(0.316)**	(0.397)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 2,980 (2,478 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 34: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 50 to 59

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	-0.026	0.575	12.067	-0.069	-0.403
	(0.063)	(31.263)	(35.736)	(7.933)	(0.485)
Not married or widowed	0.062	42.635	28.373	8.365	0.009
	(0.046)	(22.604)	(25.839)	(5.736)	(0.351)
Widowed	-0.041	-50.573	-14.394	-2.593	-0.924
	(0.104)	(51.411)	(58.767)	(13.045)	(0.798)
Income/Poverty line	0.054	14.285	26.614	8.617	0.334
	(0.014)**	(6.948)*	(7.942)**	(1.763)**	(0.108)**
Female	-0.557	-156.455	-369.737	-77.621	-4.117
	(0.040)**	(19.751)**	(22.577)**	(5.012)**	(0.307)**
Black	-0.186	-212.155	-227.936	-46.901	-1.896
	(0.053)**	(26.271)**	(30.031)**	(6.666)**	(0.408)**
Hispanic	0.065	-30.726	-29.443	6.851	-0.204
	(0.055)	(26.988)	(30.849)	(6.848)	(0.419)
Other	-0.086	-153.034	-126.703	-3.104	-0.689
	(0.097)	(47.851)**	(54.698)*	(12.142)	(0.743)
High School graduate	0.244	112.532	108.957	34.171	1.518
	(0.052)**	(25.585)**	(29.246)**	(6.492)**	(0.397)**
Age	-0.019	-4.188	-12.448	-2.144	-0.071
	(0.007)**	(3.486)	(3.985)**	(0.885)*	(0.054)
Constant	2.849	1,040.51	2,019.24	393.272	19.153
	(0.391)**	(192.385)**	(219.916)**	(48.818)**	(2.987)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 2,980. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 35: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 50 to 59

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.028	-0.030	-0.067	-0.098	0.043	0.155
	(0.019)	(0.017)	(0.031)*	(0.030)**	(0.013)**	(0.027)**
Not married or widowed	-0.031	-0.002	-0.027	-0.028	0.034	0.043
	(0.013)*	(0.012)	(0.021)	(0.021)	(0.009)**	(0.018)*
Widowed	0.000	0.043	0.055	-0.005	0.043	-0.014
	(0.029)	(0.037)	(0.054)	(0.049)	(0.024)	(0.038)
Income/Poverty line	-0.013	0.023	0.057	0.063	-0.017	-0.069
	(0.004)**	(0.004)**	(0.007)**	(0.006)**	(0.002)**	(0.005)**
Female	-0.007	-0.025	-0.051	-0.049	0.007	0.014
	(0.012)	(0.010)*	(0.019)**	(0.019)**	(0.006)	(0.016)
Black	0.133	-0.036	-0.121	-0.067	-0.005	-0.043
	(0.020)**	(0.012)**	(0.022)**	(0.025)**	(0.007)	(0.019)*
Hispanic	0.083	0.001	-0.109	-0.055	-0.006	-0.137
	(0.019)**	(0.014)	(0.024)**	(0.027)*	(0.008)	(0.018)**
Other	0.063	-0.042	-0.192	-0.086	0.021	0.002
	(0.035)	(0.017)*	(0.031)**	(0.047)	(0.018)	(0.036)
High School graduate	-0.034	0.025	0.157	0.175	0.014	-0.014
	(0.016)*	(0.013)	(0.023)**	(0.025)**	(0.006)*	(0.020)
Age	0.007	-0.003	-0.005	-0.007	-0.001	0.012
	(0.002)**	(0.002)	(0.003)	(0.003)*	(0.001)	(0.003)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 3,236 (2,690 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 36: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 50-59, Sample of 200% of poverty line or less

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	37.097	0.298	-26.130	-4.412	-0.013	0.058
	(67.220)	(2.842)	(36.473)	(6.971)	(0.058)	(0.077)
Not married or widowed	172.187	4.615	40.701	1.350	0.041	0.048
	(67.076)*	(2.836)	(37.014)	(6.956)	(0.058)	(0.077)
Widowed	212.267	2.834	68.179	3.903	0.027	0.029
	(135.463)	(5.728)	(73.439)	(14.047)	(0.118)	(0.156)
Income/Poverty line	48.489	3.341	4.504	-0.351	0.066	0.034
	(65.794)	(2.782)	(35.752)	(6.823)	(0.057)	(0.076)
Female	-672.777	-26.546	-39.235	-2.287	-0.503	-0.534
	(63.587)**	(2.689)**	(34.670)	(6.594)	(0.055)**	(0.073)**
Black	-104.529	-5.973	-82.394	8.359	-0.130	-0.578
	(82.282)	(3.479)	(44.035)	(8.533)	(0.071)	(0.094)**
Hispanic	-101.298	-0.388	-56.998	29.218	0.005	-0.267
	(81.595)	(3.450)	(45.054)	(8.461)**	(0.071)	(0.094)**
Other	-46.272	1.258	56.632	17.539	0.170	-0.245
	(140.928)	(5.959)	(78.088)	(14.614)	(0.122)	(0.162)
High School graduate	137.230	4.592	88.254	17.910	0.119	0.261
	(68.916)*	(2.914)	(37.562)*	(7.147)*	(0.060)*	(0.079)**
Age	-31.258	-1.185	1.160	-0.401	-0.012	-0.009
	(10.987)**	(0.465)*	(6.046)	(1.139)	(0.010)	(0.013)
Constant	3811.352	145.123	420.364	81.884	2.206	2.720
	(603.599)**	(25.522)**	(334.101)	(62.593)	(0.524)**	(0.693)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 988 (819 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 37: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 50 to 59, Sample of 200% of poverty line or less

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	-0.048	12.163	7.699	-3.737	-0.382
	(0.070)	(37.343)	(44.248)	(9.349)	(0.547)
Not married or widowed	0.052	62.799	84.843	17.282	0.102
	(0.070)	(37.263)	(44.153)	(9.329)	(0.546)
Widowed	0.017	-16.726	47.774	11.24	-0.436
	(0.141)	(75.254)	(89.168)	(18.841)	(1.102)
Income/Poverty line	0.016	50.77	78.66	10.828	0.285
	(0.068)	(36.551)	(43.309)	(9.151)	(0.535)
Female	-0.562	-124.755	-350.038	-80.702	-4.478
	(0.066)**	(35.325)**	(41.856)**	(8.844)**	(0.517)**
Black	-0.13	-199.024	-234.368	-45.508	-1.008
	(0.086)	(45.710)**	(54.162)**	(11.444)**	(0.669)
Hispanic	0.253	-20.917	-8.136	22.75	1.144
	(0.085)**	(45.329)	(53.710)	(11.349)*	(0.664)
Other	0.153	-54.795	-84.469	16.993	0.346
	(0.146)	(78.291)	(92.766)	(19.601)	(1.147)
High School graduate	0.367	116.217	107.08	38	2.144
	(0.072)**	(38.286)**	(45.364)*	(9.585)**	(0.561)**
Age	-0.022	-11.226	-20.071	-5.342	-0.13
	(0.011)	(6.104)	(7.232)**	(1.528)**	(0.089)
Constant	2.885	1,341.68	2,331.22	552.574	21.553
	(0.627)**	(335.321)**	(397.320)**	(83.951)**	(4.911)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 988. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 38: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 50 to 59, Sample of 200% of poverty line or less

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.006	-0.012	-0.033	-0.090	0.087	0.171
	(0.026)	(0.013)	(0.026)	(0.036)*	(0.022)**	(0.034)**
Not married or widowed	-0.087	-0.003	-0.021	-0.002	0.080	0.054
	(0.025)**	(0.014)	(0.027)	(0.037)	(0.021)**	(0.034)
Widowed	-0.029	0.018	0.003	-0.013	0.161	0.043
	(0.044)	(0.035)	(0.055)	(0.073)	(0.061)**	(0.067)
Income/Poverty line	-0.018	-0.001	0.026	-0.014	-0.022	-0.095
	(0.025)	(0.013)	(0.027)	(0.036)	(0.019)	(0.033)**
Female	0.026	-0.026	-0.044	-0.084	0.020	0.014
	(0.024)	(0.013)	(0.026)	(0.035)*	(0.019)	(0.032)
Black	0.109	-0.015	-0.036	-0.003	-0.026	-0.085
	(0.036)**	(0.015)	(0.030)	(0.044)	(0.022)	(0.039)*
Hispanic	0.065	0.017	-0.040	0.039	0.006	-0.239
	(0.034)	(0.018)	(0.031)	(0.046)	(0.025)	(0.037)**
Other	0.022	-0.027	-0.083	-0.024	0.056	-0.078
	(0.056)	(0.017)	(0.040)*	(0.075)	(0.049)	(0.065)
High School graduate	-0.015	0.018	0.108	0.229	0.065	-0.011
	(0.026)	(0.014)	(0.027)**	(0.036)**	(0.020)**	(0.034)
Age	0.018	-0.003	-0.007	-0.009	-0.001	0.022
	(0.004)**	(0.002)	(0.005)	(0.006)	(0.003)	(0.006)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 1,072 (891 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 39: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 40-49

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	75.465	-1.182	73.415	6.262	0.031	0.063
	(46.442)	(1.997)	(38.745)	(5.025)	(0.043)	(0.060)
Not married or widowed	96.698	1.460	26.373	-4.355	-0.012	0.069
	(35.231)**	(1.515)	(29.394)	(3.812)	(0.032)	(0.045)
Widowed	81.214	1.657	97.596	17.185	0.026	0.072
	(140.502)	(6.043)	(123.254)	(15.201)	(0.129)	(0.181)
Income/Poverty line	7.748	0.810	26.450	2.321	0.038	0.027
	(11.393)	(0.490)	(9.601)**	(1.233)	(0.010)**	(0.015)
Female	-824.476	-32.686	-101.675	-19.184	-0.547	-0.766
	(32.146)**	(1.383)**	(26.954)**	(3.478)**	(0.029)**	(0.041)**
Black	-168.446	-6.221	-81.347	23.888	-0.173	-0.628
	(42.527)**	(1.829)**	(35.241)*	(4.601)**	(0.039)**	(0.055)**
Hispanic	-181.174	-3.677	-62.506	26.548	-0.060	-0.396
	(41.839)**	(1.799)*	(35.423)	(4.527)**	(0.038)	(0.054)**
Other	-296.542	-5.195	-81.056	13.321	-0.157	-0.472
	(89.654)**	(3.856)	(74.170)	(9.700)	(0.082)	(0.115)**
High School graduate	39.317	-0.896	57.114	3.925	0.065	0.079
	(40.928)	(1.760)	(34.996)	(4.428)	(0.037)	(0.053)
Age	-18.619	-0.728	-7.115	-1.264	-0.007	-0.013
	(5.651)**	(0.243)**	(4.745)	(0.611)*	(0.005)	(0.007)
Constant	3520.148	135.117	853.424	135.510	2.127	3.244
	(255.674)**	(10.996)**	(214.879)**	(27.662)**	(0.234)**	(0.329)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 3,707 (3,066 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 40: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 40 to 49

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	0.060	15.895	18.754	2.893	0.207
	(0.057)	(27.611)	(31.090)	(6.838)	(0.412)
Not married or widowed	0.054	24.088	24.709	0.039	-0.186
	(0.043)	(20.946)	(23.585)	(5.187)	(0.313)
Widowed	-0.026	60.957	47.973	10.43	-0.024
	(0.171)	(83.532)	(94.056)	(20.686)	(1.247)
Income/Poverty line	0.044	9.733	17.000	6.853	0.312
	(0.014)**	(6.774)	(7.627)*	(1.677)**	(0.101)**
Female	-0.745	-227.331	-466.082	-90.49	-4.881
	(0.039)**	(19.112)**	(21.519)**	(4.733)**	(0.285)**
Black	-0.165	-248.063	-255.079	-53.973	-1.204
	(0.052)**	(25.283)**	(28.469)**	(6.261)**	(0.377)**
Hispanic	-0.041	-89.228	-82.519	-4.304	-0.422
	(0.051)	(24.874)**	(28.008)**	(6.160)	(0.371)
Other	-0.171	-188.23	-181.697	-32.531	-1.554
	(0.109)	(53.301)**	(60.017)**	(13.200)*	(0.796)
High School graduate	0.006	76.283	-5.084	5.237	1.292
	(0.050)	(24.333)**	(27.398)	(6.026)	(0.363)**
Age	-0.012	-15.408	-15.777	-1.855	-0.064
	(0.007)	(3.359)**	(3.783)**	(0.832)*	(0.050)
Constant	2.744	1,662.76	2,322.54	415.062	19.373
	(0.312)**	(152.004)**	(171.156)**	(37.644)**	(2.269)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 3,707. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 41: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 40 to 49

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.015	-0.025	-0.077	-0.106	0.060	0.127
	(0.011)	(0.013)	(0.025)**	(0.024)**	(0.012)**	(0.020)**
Not married or widowed	0.004	-0.017	-0.070	-0.031	0.024	0.059
	(0.009)	(0.010)	(0.018)**	(0.018)	(0.006)**	(0.014)**
Widowed	0.083	-0.008	-0.012	-0.078	0.101	0.127
	(0.047)	(0.045)	(0.081)	(0.078)	(0.046)*	(0.064)*
Income/Poverty line	-0.007	0.015	0.060	0.046	-0.011	-0.038
	(0.003)**	(0.003)**	(0.006)**	(0.006)**	(0.002)**	(0.004)**
Female	-0.003	-0.017	-0.041	-0.050	0.018	0.023
	(0.008)	(0.009)	(0.017)*	(0.016)**	(0.005)**	(0.012)
Black	0.041	-0.004	-0.056	-0.056	-0.020	-0.061
	(0.013)**	(0.011)	(0.021)**	(0.022)*	(0.005)**	(0.014)**
Hispanic	0.033	-0.025	-0.137	-0.066	-0.021	-0.133
	(0.012)**	(0.011)*	(0.020)**	(0.022)**	(0.005)**	(0.013)**
Other	0.004	-0.033	-0.084	-0.059	0.004	-0.002
	(0.023)	(0.018)	(0.039)*	(0.045)	(0.012)	(0.030)
High School graduate	-0.003	0.036	0.149	0.171	0.015	-0.015
	(0.009)	(0.011)**	(0.020)**	(0.022)**	(0.005)**	(0.015)
Age	0.005	0.000	-0.003	-0.004	0.001	0.009
	(0.001)**	(0.002)	(0.003)	(0.003)	(0.001)	(0.002)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 4,041 (3,333 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 42: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 60 and Above

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	-102.503	-3.954	-57.495	-7.573	-0.083	-0.103
	(29.405)**	(1.294)**	(41.741)	(3.838)*	(0.032)**	(0.043)*
Not married or widowed	34.322	0.519	20.140	0.092	0.007	0.068
	(22.089)	(0.972)	(30.392)	(2.883)	(0.024)	(0.032)*
Widowed	25.912	0.739	34.943	-1.547	0.022	0.071
	(21.025)	(0.925)	(29.231)	(2.744)	(0.023)	(0.031)*
Income/Poverty line	31.299	1.466	17.226	4.878	0.032	0.035
	(5.903)**	(0.260)**	(8.213)*	(0.770)**	(0.006)**	(0.009)**
Female	-434.158	-17.845	-79.820	-6.466	-0.336	-0.450
	(16.473)**	(0.725)**	(23.059)**	(2.150)**	(0.018)**	(0.024)**
Black	-187.388	-5.544	-37.394	2.722	-0.253	-0.552
	(22.406)**	(0.986)**	(30.884)	(2.925)	(0.024)**	(0.033)**
Hispanic	-91.975	-1.143	-69.327	10.764	-0.138	-0.283
	(22.117)**	(0.973)	(31.294)*	(2.887)**	(0.024)**	(0.032)**
Other	-201.801	-4.275	-34.207	14.294	-0.054	-0.481
	(51.019)**	(2.245)	(69.911)	(6.659)*	(0.055)	(0.075)**
High School graduate	126.501	4.628	97.550	13.081	0.090	0.166
	(18.285)**	(0.805)**	(25.461)**	(2.387)**	(0.020)**	(0.027)**
Age	-16.075	-0.635	1.827	0.213	-0.005	-0.009
	(1.259)**	(0.055)**	(1.769)	(0.164)	(0.001)**	(0.002)**
Constant	2982.069	116.521	451.265	56.198	1.905	2.755
	(96.741)**	(4.257)**	(136.269)**	(12.627)**	(0.105)**	(0.141)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 7,614 (6,197 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 43: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 60 and Above

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	-0.087	-33.622	-62.296	-14.543	-0.698
	(0.044)*	(19.521)	(20.858)**	(5.256)**	(0.343)*
Not married or widowed	0.019	33.596	10.104	5.956	-0.194
	(0.033)	(14.664)*	(15.668)	(3.948)	(0.258)
Widowed	0.036	3.828	0.158	-4.037	0.049
	(0.032)	(13.958)	(14.914)	(3.758)	(0.245)
Income/Poverty line	0.063	18.713	23.373	8.102	0.311
	(0.009)**	(3.919)**	(4.187)**	(1.055)**	(0.069)**
Female	-0.402	-107.613	-257.705	-49.655	-3.155
	(0.025)**	(10.935)**	(11.684)**	(2.945)**	(0.192)**
Black	-0.259	-207.946	-220.482	-47.996	-2.472
	(0.034)**	(14.875)**	(15.893)**	(4.005)**	(0.261)**
Hispanic	-0.115	-42.142	-30.172	2.108	-1.183
	(0.033)**	(14.682)**	(15.688)	(3.953)	(0.258)**
Other	-0.111	-162.359	-145.184	8.674	-0.773
	(0.077)	(33.869)**	(36.189)**	(9.120)	(0.595)
High School graduate	0.178	69.597	84.512	28.39	1.168
	(0.027)**	(12.139)**	(12.970)**	(3.269)**	(0.213)**
Age	-0.002	-1.988	-7.559	-1.412	-0.039
	(0.002)	(0.836)*	(0.893)**	(0.225)**	(0.015)**
Constant	1.866	897.387	1,717.15	352.713	17.726
	(0.145)**	(64.221)**	(68.620)**	(17.293)**	(1.129)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 7,614. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 44: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 60 and Above

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.021	-0.012	-0.075	-0.097	0.018	0.146
	(0.016)	(0.012)	(0.021)**	(0.024)**	(0.008)*	(0.016)**
Not married or widowed	-0.023	-0.005	-0.016	-0.064	0.018	0.023
	(0.011)*	(0.008)	(0.015)	(0.017)**	(0.007)**	(0.014)
Widowed	-0.002	-0.015	-0.039	-0.058	0.006	0.026
	(0.011)	(0.007)*	(0.014)**	(0.016)**	(0.006)	(0.014)
Income/Poverty line	-0.020	0.014	0.038	0.042	-0.007	-0.026
	(0.003)**	(0.002)**	(0.004)**	(0.005)**	(0.002)**	(0.004)**
Female	-0.014	-0.009	-0.008	-0.011	0.017	0.106
	(0.009)	(0.006)	(0.012)	(0.013)	(0.004)**	(0.011)**
Black	0.123	-0.019	-0.108	-0.113	-0.007	-0.019
	(0.014)**	(0.007)*	(0.013)**	(0.017)**	(0.005)	(0.015)
Hispanic	0.080	-0.015	-0.136	-0.163	0.003	-0.047
	(0.013)**	(0.008)	(0.014)**	(0.018)**	(0.006)	(0.015)**
Other	0.063	-0.014	-0.063	-0.107	-0.005	-0.004
	(0.031)*	(0.015)	(0.029)*	(0.039)**	(0.011)	(0.033)
High School graduate	-0.029	0.028	0.115	0.145	0.004	-0.039
	(0.010)**	(0.007)**	(0.012)**	(0.014)**	(0.004)	(0.012)**
Age	-0.002	-0.001	-0.002	-0.004	-0.001	0.011
	(0.001)*	0.000	(0.001)*	(0.001)**	(0.000)*	(0.001)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 8,666 (7,051 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 45: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 40-49, Sample of 200% of poverty line or less

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	74.707	-1.170	3.038	5.207	0.042	0.020
	(60.499)	(2.648)	(42.320)	(6.393)	(0.051)	(0.079)
Not married or widowed	112.022	1.320	37.014	-6.873	-0.040	0.080
	(60.061)	(2.629)	(42.024)	(6.347)	(0.050)	(0.079)
Widowed	-15.784	1.301	-33.340	-1.581	-0.207	-0.065
	(205.979)	(9.015)	(141.631)	(21.767)	(0.172)	(0.270)
Income/Poverty line	115.175	4.534	79.970	-0.117	0.077	0.171
	(55.995)*	(2.451)	(40.129)*	(5.917)	(0.047)	(0.073)*
Female	-856.503	-34.804	-131.710	-20.338	-0.542	-0.833
	(56.882)**	(2.489)**	(39.922)**	(6.011)**	(0.048)**	(0.075)**
Black	-173.252	-6.492	-103.296	25.663	-0.141	-0.730
	(77.081)*	(3.373)	(53.215)	(8.146)**	(0.064)*	(0.101)**
Hispanic	-242.603	-3.987	-101.205	38.669	-0.035	-0.542
	(71.248)**	(3.118)	(49.677)*	(7.529)**	(0.060)	(0.093)**
Other	-389.449	1.601	-31.174	12.443	-0.139	-0.520
	(153.700)*	(6.727)	(106.743)	(16.242)	(0.128)	(0.201)**
High School graduate	40.202	-1.238	86.576	3.454	0.064	0.084
	(60.780)	(2.660)	(42.803)*	(6.423)	(0.051)	(0.080)
Age	-21.759	-0.757	-1.689	-1.886	-0.004	-0.018
	(10.050)*	(0.440)	(7.059)	(1.062)	(0.008)	(0.013)
Constant	3575.570	133.276	590.250	165.116	1.926	3.434
	(455.365)**	(19.929)**	(319.083)	(48.120)**	(0.380)**	(0.597)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 1,477 (1,216 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 46: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 40 to 49, Sample of 200% of poverty line or less

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	-0.013	20.619	12.481	3.558	0.202
	(0.070)	(34.199)	(40.213)	(8.373)	(0.495)
Not married or widowed	0.046	41.842	42.143	-6.41	0.134
	(0.069)	(33.951)	(39.922)	(8.313)	(0.491)
Widowed	-0.259	18.131	-13.919	-24.187	-1
	(0.237)	(116.436)	(136.911)	(28.509)	(1.685)
Income/Poverty line	0.105	103.255	105.285	17.504	0.511
	(0.065)	(31.653)**	(37.219)**	(7.750)*	(0.458)
Female	-0.779	-259.053	-511.314	-97.215	-5.453
	(0.066)**	(32.154)**	(37.809)**	(7.873)**	(0.465)**
Black	-0.269	-270.927	-268.014	-50.995	-0.8
	(0.089)**	(43.573)**	(51.235)**	(10.669)**	(0.631)
Hispanic	-0.061	-105.723	-83.003	-0.046	-0.282
	(0.082)	(40.275)**	(47.358)	(9.861)	(0.583)
Other	-0.009	-262.35	-166.95	-5.224	-0.826
	(0.177)	(86.884)**	(102.162)	(21.273)	(1.257)
High School graduate	-0.016	62.064	-16.269	7.707	1.377
	(0.070)	(34.358)	(40.400)	(8.412)	(0.497)**
Age	-0.016	-14.899	-17.332	-2.165	-0.01
	(0.012)	(5.681)**	(6.680)**	(1.391)	(0.082)
Constant	2.946	1,571.78	2,321.66	419.236	16.796
	(0.525)**	(257.409)**	(302.674)**	(63.026)**	(3.725)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 1,477. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 47: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 40 to 49, Sample of 200% of poverty line or less

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.010	-0.020	-0.033	-0.133	0.083	0.143
	(0.015)	(0.011)	(0.022)	(0.030)**	(0.015)**	(0.025)**
Not married or widowed	-0.001	-0.004	-0.019	0.008	0.043	0.080
	(0.015)	(0.011)	(0.023)	(0.030)	(0.012)**	(0.024)**
Widowed	0.045	0.039	0.062	0.002	0.148	0.095
	(0.059)	(0.054)	(0.085)	(0.102)	(0.075)*	(0.090)
Income/Poverty line	-0.008	-0.010	0.042	0.090	-0.034	-0.091
	(0.014)	(0.011)	(0.022)	(0.028)**	(0.010)**	(0.022)**
Female	0.013	-0.004	-0.037	-0.111	0.022	0.027
	(0.014)	(0.011)	(0.022)	(0.028)**	(0.011)*	(0.023)
Black	0.041	0.020	0.026	-0.052	-0.040	-0.119
	(0.022)	(0.016)	(0.028)	(0.038)	(0.010)**	(0.026)**
Hispanic	0.003	-0.004	-0.085	-0.059	-0.046	-0.257
	(0.018)	(0.013)	(0.025)**	(0.036)	(0.012)**	(0.024)**
Other	-0.013	-0.011	-0.054	-0.103	0.003	-0.090
	(0.033)	(0.022)	(0.042)	(0.067)	(0.023)	(0.043)*
High School graduate	-0.015	0.012	0.090	0.187	0.028	-0.029
	(0.015)	(0.011)	(0.022)**	(0.029)**	(0.011)*	(0.025)
Age	0.006	-0.003	-0.004	-0.008	0.000	0.009
	(0.002)*	(0.002)	(0.004)	(0.005)	(0.002)	(0.004)*

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 1,623 (1,343 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 48: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 60 and Above, Sample of 200% of poverty line or less

	Energy	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	-102.749	-3.884	-82.710	-7.794	-0.086	-0.091
	(33.996)**	(1.460)**	(44.526)	(4.341)	(0.034)*	(0.048)
Not married or widowed	49.259	0.605	-42.573	1.725	0.001	0.109
	(31.319)	(1.345)	(40.618)	(3.999)	(0.031)	(0.044)*
Widowed	32.364	0.118	-8.518	2.314	0.050	0.094
	(30.690)	(1.318)	(40.109)	(3.918)	(0.031)	(0.043)*
Income/Poverty line	48.723	1.160	-66.283	3.550	0.049	0.058
	(27.914)	(1.198)	(36.513)	(3.564)	(0.028)	(0.039)
Female	-382.762	-15.850	-31.347	-6.804	-0.297	-0.391
	(25.208)**	(1.082)**	(32.939)	(3.219)*	(0.025)**	(0.035)**
Black	-182.159	-4.975	-54.724	5.874	-0.222	-0.567
	(33.294)**	(1.429)**	(42.709)	(4.251)	(0.033)**	(0.047)**
Hispanic	-92.944	-0.723	-76.779	12.017	-0.111	-0.284
	(31.004)**	(1.331)	(40.737)	(3.959)**	(0.031)**	(0.044)**
Other	-166.636	-0.308	41.313	21.671	0.024	-0.385
	(82.166)*	(3.528)	(105.465)	(10.491)*	(0.082)	(0.116)**
High School graduate	127.170	4.233	83.108	13.311	0.110	0.195
	(25.703)**	(1.103)**	(32.984)*	(3.282)**	(0.026)**	(0.036)**
Age	-13.888	-0.530	1.426	0.047	-0.005	-0.010
	(1.939)**	(0.083)**	(2.529)	(0.248)	(0.002)*	(0.003)**
Constant	2765.774	108.149	596.690	66.661	1.793	2.749
	(149.765)**	(6.430)**	(195.503)**	(19.122)**	(0.149)**	(0.211)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 3,510 (2,835 for Regression 3). Regression 3 excludes 1999 and 2000 data due to change in variable. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 49: Effect of Food Insecurity and Other Variables on Various Nutrient Intake Outcomes for Individuals Ages 60 and Above, Sample of 200% of poverty line or less

	Vitamin B6	Calcium	Phosphorous	Magnesium	Iron
	(1)	(2)	(3)	(4)	(5)
Food insecure	-0.101	-28.284	-62.079	-15.135	-0.815
	(0.045)*	(21.826)	(23.764)**	(5.884)*	(0.371)*
Not married or widowed	0.045	52.675	24.855	6.639	-0.151
	(0.042)	(20.108)**	(21.892)	(5.420)	(0.342)
Widowed	0.073	18.817	3.014	-2.901	0.35
	(0.041)	(19.704)	(21.453)	(5.311)	(0.335)
Income/Poverty line	0.05	39.999	25.553	7.541	0.545
	(0.037)	(17.922)*	(19.512)	(4.831)	(0.305)
Female	-0.336	-82.222	-222.332	-40.12	-2.782
	(0.034)**	(16.184)**	(17.621)**	(4.363)**	(0.275)**
Black	-0.244	-195.67	-213.24	-43.043	-1.839
	(0.044)**	(21.376)**	(23.273)**	(5.762)**	(0.364)**
Hispanic	-0.107	-6.725	-15.178	3.823	-0.815
	(0.041)**	(19.906)	(21.672)	(5.366)	(0.339)*
Other	-0.01	-86.349	-88.767	23.304	0.371
	(0.109)	(52.753)	(57.435)	(14.220)	(0.898)
High School graduate	0.165	88.179	83.722	26.084	1.222
	(0.034)**	(16.502)**	(17.966)**	(4.448)**	(0.281)**
Age	-0.004	-0.871	-6.526	-1.251	-0.023
	(0.003)	(1.245)	(1.355)**	(0.336)**	(0.021)
Constant	1.913	750.029	1,612.03	335.097	15.644
	(0.199)**	(96.153)**	(104.688)**	(25.919)**	(1.636)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 3,510. Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

Table 50: Effect of Food Insecurity and Other Variables on Various Health Outcomes for Individuals Ages 60 and Above, Sample of 200% of poverty line or less

	Diabetic	Excellent	Excellent or very good	Excellent, very good, or good	Depression	ADL limitations
	(1)	(2)	(3)	(4)	(5)	(6)
Food insecure	0.040	-0.004	-0.051	-0.087	0.021	0.111
	(0.020)*	(0.010)	(0.020)**	(0.026)**	(0.011)	(0.017)**
Not married or widowed	-0.034	0.000	-0.004	-0.042	0.020	0.006
	(0.017)*	(0.009)	(0.018)	(0.024)	(0.010)*	(0.018)
Widowed	-0.005	-0.016	-0.039	-0.033	0.007	0.024
	(0.017)	(0.008)	(0.017)*	(0.023)	(0.009)	(0.018)
Income/Poverty line	-0.008	0.005	0.029	0.086	-0.016	-0.068
	(0.016)	(0.008)	(0.017)	(0.021)**	(0.007)*	(0.016)**
Female	0.007	-0.004	-0.012	-0.019	0.019	0.067
	(0.014)	(0.008)	(0.015)	(0.019)	(0.007)**	(0.015)**
Black	0.099	0.003	-0.049	-0.060	-0.020	-0.017
	(0.021)**	(0.010)	(0.017)**	(0.025)*	(0.008)**	(0.020)
Hispanic	0.075	-0.003	-0.108	-0.148	-0.003	-0.049
	(0.019)**	(0.009)	(0.016)**	(0.023)**	(0.008)	(0.019)*
Other	0.061	-0.005	-0.017	-0.055	-0.009	-0.039
	(0.049)	(0.021)	(0.041)	(0.058)	(0.018)	(0.049)
High School graduate	-0.018	0.013	0.068	0.123	0.010	-0.018
	(0.015)	(0.008)	(0.015)**	(0.019)**	(0.007)	(0.015)
Age	-0.003	0.001	0.003	-0.001	-0.001	0.008
	(0.001)**	(0.001)	(0.001)**	(0.001)	(0.001)	(0.001)**

Notes: Data is from the 1999-2008 National Health and Nutrition Examination Survey (NHANES). Number of observations is 4,063 (3,259 for regressions 2, 3, and 4). Standard errors in parentheses. *Significant at 5%; ** Significant at 1%.

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