

Examining Food Insecurity in the Rural United States: A Qualitative Study

RESEARCH BRIEF



Study conducted from February through May 2019 and released in February 2020

Prepared by: Lindsey Haynes-Maslow, Lauri Andress, Carmen Byker-Shanks, Annie Hardison-Moody, Stephanie Jilcott Pitts, Megan Patton-Lopez, T. Elaine Prewitt

Examining Food Insecurity in the Rural United States: A Qualitative Study

Prepared by: Lindsey Haynes-Maslow, Lauri Andress, Carmen Byker-Shanks, Annie Hardison-Moody, Stephanie Jilcott Pitts, Megan Patton-Lopez, T. Elaine Prewitt

Acknowledgements: Virgil Dupuis, Salish Kootenai College; Ana Bueno, Latino Community Association

Prepared for: Share Our Strength and Feeding America

Overview

In 2019, Share Our Strength and Feeding America® partnered with a team of researchers from six universities*, led by North Carolina State University, on an in-depth qualitative study to explore what makes it easier or harder for families in rural areas to provide food for their kids. The study is the first to provide an in-depth exploration of the experiences of food insecurity in six rural counties across the United States. Below is a summary of the study research questions, methodology, results, and recommendations.

Introduction

People living in rural America are more likely to experience poverty than those in urban America. The rural poverty rate was 16.4% compared to 12.9% for urban areas in 2017.¹ Rural employment also remains well below its level prior to the Great Recession, while job gains in urban areas have more than compensated for losses.¹ Furthermore, rural counties also experience “persistent poverty” rates more often than urban communities, as defined by counties with at least 20% of the population living in poverty for over 30 years.²

Food insecurity is linked to poverty. The U.S. Department of Agriculture (USDA) defines food insecurity as a “lack of consistent access to enough food for an active, healthy life.”³ Food security is particularly important as it is essential for health and development across the lifespan.⁴⁻⁶ Overall, nearly one in nine American households experience food insecurity during the year, and one in seven children may lack consistent access to food. Food insecurity rates are higher in rural versus urban areas of the United States.^{3, 7}

According to the USDA’s 2018 Household Food Security report, the food insecurity rate in rural areas was 12.7% compared to 10.8% in urban areas.⁷

A myriad of understudied factors contributes to the difference in food security rates between rural versus urban locations: such as economic instability, low food access, transportation barriers, and financial insecurity.^{8,9} While rural communities face many challenges, they also have numerous assets that can address food insecurity, including strong social ties and networks, a deep connection to place, locally-owned businesses with entrepreneurial owners, as well as land for growing healthy food.^{8, 10-12} In addition, use of SNAP and WIC is higher among rural versus urban residents,^{13, 14} and some evidence suggests that there is greater saturation of food banks and pantries in rural versus urban areas.¹⁵ However, more work is needed to understand how participants use such programs and how these resources can work synergistically to help families overcome food insecurity.

In order to examine the experiences of rural families with children and identify potential solutions to the problem of food insecurity, a team of researchers conducted in-depth interviews in six rural counties located across six

* East Carolina University, Montana State University with Salish Kootenai College, University of Arkansas for Medical Sciences, West Virginia University, Western Oregon University

states. For the purposes of this study, a county was considered rural if it had a Rural-Urban-Continuum-Code of 4 or greater. (A RUCC of 4 is defined as 20,000 or more residents, adjacent to an urban population.)

The study sought to understand what enables and constrains families' ability to provide food for their children. These were the five key research questions that formed the structure of the interviews:

1. What are the circumstances and characteristics of rural families experiencing food insecurity?
2. What prevents rural families from escaping food insecurity?
3. What influences access to and participation in federal nutrition assistance programs and charitable food assistance programs among rural families?
4. What other solutions are needed to contribute to greater food security in rural areas?
5. How do the answers to these questions vary among residents of geographically, racially/ethnically, and politically diverse rural communities?

The methods, results, and recommendations are further described below.

Methods

To gain a better understanding of what enables and constrains rural families' abilities to provide food for their children, in February – May 2019, a team of researchers conducted 153 semi-structured interviews with caregivers in rural counties. Participants were recruited from counties in six states: Arkansas, Montana, North Carolina, Oregon, Texas, and West Virginia (see Figure 1). One county within each state was selected and the counties were diverse in respect to dimensions including geographic region, racial/ethnic composition, experience of persistent poverty, recent natural disaster, and political leaning. All counties had above average rates of child food insecurity. Participants were eligible if they were the primary caregiver of a child(ren), the main purchaser of food in the household, and experienced some level of food insecurity (as assessed by answering affirmatively to at least 1 item in the 2-item screener, or if using a food assistance program). Participants were recruited from community sites (such as schools and libraries) and by using study flyers posted in community locations. Researchers from each state conducted 25-28 interviews. Interviews were audio-recorded and transcribed verbatim.

To analyze the interviews, researchers paired up to read 3 to 5 data-rich interviews and develop independent code lists. These lists were discussed among the entire research team to create the final code book. In total, the final codebook included 23 themes with definitions. The 23 themes were used by trained study team members to code all 153 interviews. Coded interviews were imported into Atlas.Ti for management. Major themes were decided upon based on code frequency and were organized by insights related to the key research questions.

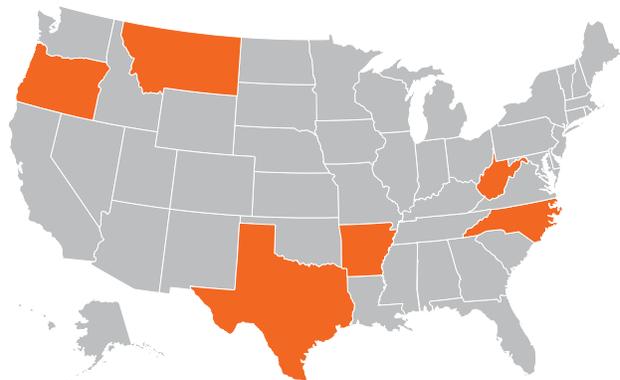


Figure 1. The six states where study participants resided are highlighted in orange.

Results

Participant characteristics are presented in the Appendix in Table 1. Nearly 41% of participants were African American, 26% White, 17% Hispanic/Latino, 14% Native American, and 3% selected “other” or “prefer not to answer.” Ninety percent were female, 82% had access to a car, and 41% were married or living with a partner. Sixty-three percent had incomes at or below the federal poverty line, and 29% of participants were employed full time and 22% were employed part time outside the home. Food insecurity was calculated using the USDA’s 6-item food insecurity screener. Based on self-reported responses, 19.0% of participants reported having high or marginal food security, 49.0% low food security, and 28.6% very low food security.

The research results are summarized below, including participants’ perceptions of their rural communities, responses to the five key research questions, and differences across study sites.

Perceptions of Rural Communities

Participants had positive perceptions of their rural communities, but felt there were negative aspects of their community that prevented them from recommending that others live there. Participants noted that communities were close-knit and included informal social support systems like friends and family. Participants also relayed that their rural communities were a great place to raise children because they were quiet and safe. Yet a common challenge of living in rural areas was the limited employment opportunities. Additional challenges were lack of safe and affordable housing, and lack of organized activities for children after school hours. Some participants also noted increases in crime, violence, and drugs over time.

“Oh, it’s good because it’s a small town and you know everybody. But, at the same time, it’s bad because no jobs, the same schools. I mean, the same schools since you’ve been here. Nothing has changed new, so — I mean, nothing.”

- TEXAS PARTICIPANT

What are the Circumstances and Characteristics of Families Experiencing Food Insecurity?

The study found that food insecurity in these communities is very much linked to the local economy and poverty. Participants’ households struggled financially due to unemployment and underemployment and a cycle of bills that overwhelmed the household budget. Many study participants were either unemployed or had low-wage jobs. While some study participants or their family members had seasonal work (Oregon, Montana, and West Virginia), this made it difficult for families to make ends meet during the “off” seasons.

Participants reported struggling to make ends meet due to medical needs, particularly when the medical bills were unexpected. Participants noted high utility bills and vehicle expenses such as gas, insurance, and repairs.

Further exacerbating the financial struggles of food insecure families were the realities of unstable family situations, including single parent households, lack of child support payments, substance abuse, and domestic violence situations. In addition, people who were employed outside the home or going to school found it difficult to pay for childcare.

“There’s not very many community resources available. And then on top of it, all of our communities are rural, so you have to travel to get any kind of service. So, if I wanted help with anything, I’d have to leave the community I live in....”

- MONTANA PARTICIPANT

“A lot of people in this area, if they do work pipeline, certain times of the year they’re without employment, so they have to make their money stretch. And when you have a family to feed that can be very difficult at times, especially in a rural area because of all the other expense of living in that area.”

- WEST VIRGINIA PARTICIPANT

Unique to the rural setting, participants described how all of these resources (employment opportunities, community resources, and food retail establishments) were far away, making it difficult to obtain healthy and affordable food.

What Prevents Families from Escaping Food Insecurity?

Many participants had to prioritize other expenses over food in the face of unemployment or underemployment. In general, participants described monthly challenges stretching resources to cover the financial costs necessary for housing, transportation, medical and child wellbeing. In turn, this made it difficult to purchase all the food their household needed. This kept them in a cycle of food insecurity. Moreover, new employment or an increase in wages resulted in decreases in benefits, which made it difficult for families to get a “leg up” or save money for the future.

In order to maximize food dollars, families reported using coupons and shopping the sales to save money. They also bought and repacked larger cuts of meat for later use. In addition, they purchased staples (e.g. cooking oil, rice, pasta) in bulk at discount warehouses to stretch food budgets.

Unique to the rural context, families stated that they carried out large bulk shopping trips in more distant locales (supermarkets or supercenters) each month to obtain large amounts of staple items. They followed this with ‘filler’ shopping trips in stores that were closer but often had more limited options. Participants reported they could get more for their money in stores that were further away, and that stores closer to home had higher prices. This was a barrier to obtaining enough healthy food, especially among people with limited transportation options.

What influences access to and participation in federal nutrition assistance programs and charitable food assistance programs?

Overall, participants were appreciative of both charitable and federal food assistance programs, and they would generally recommend both charitable and federal food assistance programs to families needing help. There were common and divergent factors that influenced rural families’ participation or non-participation in food assistance programs. One important factor that posed as a barrier across most food assistance programs was the lack of adequate transportation for participants. This made it difficult to sign-up for programs, travel to program sites, and fully participate in programs. Listed below are factors influencing participation in SNAP, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), school breakfast, afterschool meals, summer meals, and charitable food assistance programs.

Perspectives on SNAP and WIC

The eligibility criteria for SNAP were a challenge because new employment or an increase in wages resulted in households struggling, as they felt that could not afford enough food despite an increase in overall resources. Additional themes that impacted SNAP participation included: customer service, location of the program office, and the application process (e.g., amount of forms, information collected). Participants described being treated poorly by staff when applying or renewing their SNAP benefits. Additionally, some participants expressed frustration with the

“We’ve been renting, and with rent, you got your power bill if you’re paying into power, and then from your power bill, you got the car payment, and with the car payment you got the insurance, and for the house, you got Wi-Fi, and with everything ...And so we would end up stressing on a bill or two or whatever, or maybe not buying all the food we wanted for the month or whatever.”

- MONTANA PARTICIPANT

“Whenever they want you to work, but when you work, you don’t realize you have bills and childcare. And then they give you less food stamps, which doesn’t help, either.”

- ARKANSAS PARTICIPANT

distance to the SNAP program office and the length of time it took to speak to someone on the phone when there were questions.

Regarding WIC, participants spoke highly of the customer service, access to nutrition education, and wellness checks. In Oregon, participants noted that WIC provided services in Spanish and sent helpful reminders for upcoming appointments. WIC EBT cards (available in all states except for North Carolina) were seen as a positive change over the former paper-based vouchers due to reduced stigma at the check-out line. However, some participants noted that the EBT cards made it challenging to know what benefits were still available for the month.

Many participants enjoyed the WIC-approved foods. However, some stated that they would like to see a greater focus on the fresh fruits and vegetables from the farmer's market. Others reported they did not prefer the low-fat milk and whole grain options.

Perspectives on School Breakfast, Afterschool, and Summer Meals

Participants noted that school breakfasts provided children with an important meal to begin the day. Families noted the difficulty of ensuring children arrived at school in time to eat breakfast as well as challenges around having limited time to eat school breakfast. Other barriers to school breakfast participation included food (quality, taste, preferences). Some participants felt that not enough healthy food was served during breakfast. Many families wanted less processed food for their children and did not think that cereal was an appropriate breakfast item – they felt that food served hot was better for their children.

Across all sites, respondents felt positively towards the idea of participating in afterschool meal and snack programs. Although some respondents were uncertain about whether the program was operating at their children's school, they expressed interest in wanting their child to participate if the program was available. However, some participants across counties reported that afterschool meals were not utilized due to participation in afterschool activities that didn't offer meals or snacks, children's preferences for other types of foods, and families preferring to serve traditional family meals at home.

Family members were largely supportive of the summer meals program as being helpful to parents during the summer when children were not in school. Participants recognized the program was helpful when children were not in school, accounting for one less meal families were responsible for cooking/preparing and reducing the high food budget when children are not in school.

Participants reported that the location of the summer meal sites and hours of operation were important to program access, as transportation was a major barrier to summer meals participation. Several participants reported that programs were offered in community locations such as parks, Boys & Girls Club sites, and schools. For some, the school was seen as a positive location, but others noted that hosting a summer meal site at a school could be a deterrent to participation due to a child's aversion to being in a school setting during summer, especially if the child was not eligible to participate in summer school or if the family lived far away from the school. Participants suggested offering program activities in conjunction with the meal to encourage participation.

“Extend the hours, ‘cause like I said, my baby don’t get to school until after 8:00, and I’m pretty sure that they stop feeding those kids at 8:00, so by the bus being so late I would extend breakfast hours at least until 8:30 or 8:45 to make sure all the kids are at school and have ate.”

- ARKANSAS PARTICIPANT

Perspectives on Charitable Food Assistance Programs

Participants appreciated food banks and pantries that had a client-choice model, and those that provided meats and fresh fruits and vegetables. Challenges regarding food pantries and banks revolved around 1) quality

and quantity of food; 2) access: hours of operation, distance; 3) paperwork and 4) perception: stigma and pride. Some participants indicated that hours of operation were not conducive to their own schedules. Some also felt that more locations would be helpful since many participants had to travel long distances to access a pantry. Others did not like all the paperwork they had to complete in order to qualify for food pantry services. Another barrier to obtaining help at local food pantries was participants' sense of pride. Participants described how difficult it was to ask for help. Stigma was another barrier; in particular, the low population density in rural areas made it more likely that people would be recognized seeking assistance from local programs.

Utilizing Food Assistance Programs Synergistically

The majority of respondents were participating in multiple assistance programs and described utilizing different federal and charitable food assistance programs synergistically. For example, some described using WIC to get staple food items (grains, protein, produce, etc.) and using SNAP for items that family members wanted to eat, but may not have been WIC eligible. In Montana and North Carolina, participants discussed using their SNAP benefits at different times of the month, since they stated that local stores increased food prices when SNAP benefits were loaded onto EBT cards (usually 1st or 15th of the month). In a few of the sites, participants discussed utilizing charitable food assistance programs like food pantries and church programs towards the end of the month when SNAP benefits were dwindling.

Participants' Suggested Solutions for Greater Food Security

Participants offered ideas for improving food security in their communities, including increasing the number of food pantries and improving the quality of food at food pantries. They suggested making the process of applying for and receiving SNAP benefits more accessible and easy to understand. Participants noted the need to increase job opportunities and generally wanted elected officials to recognize that food insecurity is an issue in their communities.

How Do Experiences with Food Insecurity and Food Access Vary by Site?

There were not many differences across sites on various themes related to food insecurity. However, there were differences across sites in terms of employment opportunities. For example, some states (Montana, Oregon, West Virginia) had more seasonal work opportunities which contributed to financial instability, particularly during the off months. In other communities, participants talked about experiences of racism they faced when applying for jobs. Participants from sites with extreme weather conditions (Montana, Oregon, and Arkansas) had higher electricity bills for heating and air conditioning in the winter and/or summer. In a few states, there were specific housing challenges (increased cost of housing with residential influx in Oregon, few inexpensive housing options in North Carolina). In addition, substance misuse was discussed as a challenge in rural communities, but these issues mostly arose in the Montana and North Carolina interviews. Alternative food sources were region-specific (hunting in Montana, fishing in North Carolina, and canning in West Virginia), but this was only mentioned by a few participants in each of the states. Other caregivers were dissatisfied with the types of food

“...it’s all donated and it’s for native families in our community. But not usually. I try not to go to those places too much. It’s a pride thing.”

- MONTANA PARTICIPANT

“I don’t like the fact that they’re, I would say, kind of stingy with the meat, but they will give us of canned food. And the only thing I don’t like about the canned food, you got to be very careful, because they give you just anything.”

- ARKANSAS PARTICIPANT

“I would tell them to come visit us — talk to us — see what kinda conditions we’re living in.”

- NORTH CAROLINA PARTICIPANT

that were being served in child nutrition programs, especially in Oregon and in North Carolina. Finally, some participants (those living in West Virginia and Montana) had to travel longer distances to reach a supermarket and/or supercenter versus participants in other states.

Future Research, Practice, and Policy Recommendations

As in prior research,^{16,17} the results of this study reveal that food insecure, rural households have several financial challenges that keep them in a cycle of food insecurity. As found by other research, family financial struggles coupled with distance from low-cost, healthy food options interact in a way that exacerbates the struggle for families.^{8, 9, 18}

Additional research is needed to help pinpoint more specific strategies to alleviate food insecurity in rural areas. However, building upon the current study's findings, and consistent with the existing literature, the researchers suggest the following high-level program and policy recommendations:

1. Policy efforts to improve economic and job opportunities in rural areas are warranted. As in prior studies^{14, 15}, the current study demonstrates that food insecurity could be mitigated by increased job opportunities and training in rural areas. It could be helpful to identify and partner with organizations addressing workforce development, including Economic Development / Regional Rural Development Centers.
2. Providing individuals with linkages to informal social networks would likely reduce food insecurity among rural households. Similar to other research¹⁵, the current study found that there are strong informal support networks in rural areas, which could be capitalized upon in future programming.
3. Future work should examine innovative strategies to reduce the cost of healthy food within local communities while bolstering small businesses within those communities. Unique to the rural context and similar to prior studies,^{6, 7, 16} families stated that they had to make large bulk shopping trips to supermarkets or supercenters located far from their homes each month to obtain staple items at competitive prices. Participants also reported "filler" shopping trips to smaller stores located closer to their homes that had more limited and more costly options.
4. Policy and programmatic changes are needed to ensure that potentially eligible SNAP participants know how to enroll. Innovations in program delivery, such as online or via phone, may improve individuals' experiences with the application and renewal processes. For SNAP, customer service, location of the program office, and the application process were challenges for existing participants in the current study.
5. Furthermore, programmatic changes could be incorporated to allow children the option to eat breakfast, even if they arrive at school late. This would address participant-reported challenges with children often arriving at school too late for breakfast, after breakfast had already been served.
6. Increasing flexibility within the summer meals program could help address the vast transportation barriers faced by rural, food insecure families. These changes could include revising the requirement that children consume food on-site and expanding access to non-congregate meal options, such as the Summer Electronic Benefit Transfer (Summer EBT) program.
7. For all programs, food quality was integral to continued program participation. Therefore, it is important to ensure culturally appropriate, appealing and fresh foods are provided in federal and charitable food assistance programs. Likewise, for charitable food programs, the client choice model should be encouraged, along with provision of fresh and healthy foods.

8. Evaluate policies and programs that more broadly address the socioeconomic circumstances of food insecure families in rural areas. Lack of employment opportunities, high healthcare costs, and family instability all contributed to study participants' experiences with rural food insecurity. Changes in food security should intentionally be tested as a result of policy and program implementation in the economic and healthcare sectors.

To help pinpoint more specific strategies, future research should:

- Investigate how to promote access to healthy and affordable food in the context of the local economy in rural locations.
- Explore why study participants described situations reflecting struggles with food insecurity, but did not always answer affirmatively to corresponding items in the food security questionnaire.
- Examine how decrease in SNAP benefits (when wages decrease) influences SNAP participants' perceptions of the program and how they cope with this decrease in benefits.

Addressing food insecurity in rural areas likely will require targeted and interdisciplinary efforts. The research in these six states can help inform future efforts and future research needed to alleviate rural food insecurity in the United States.

This study was created and supported in joint partnership by Share Our Strength and Feeding America, with funding provided by Share Our Strength.

For more information, please contact Karen Wong at Share Our Strength (kwong@strength.org) and Emily Engelhard at Feeding America (eengelhard@feedingamerica.org).

Appendix - Table 1: Study Demographics and Differences by State

Characteristics	Total Sample	Arkansas (N=28)	Montana (N=25)	N Carolina (N=25)	Oregon (N=25)	Texas (N=25)	W Virginia (N=25)
Mean age	37.9	39.8	33.2	32.6	39.1	44	38.4
Mean number of adults in Household	1.76	1.46	2	1.44	2.21	1.44	2.08
Mean number of children in Household	2.4	2.3	3.2	2.2	2.5	2.0	2.2
Households with at least one child <5 years of age	76 (50%)	15 (53.6%)	14 (56.0%)	16 (64.0%)	8 (32.0%)	15 (60.0%)	8 (32.0%)
Mean number of years living in county	25.5 years	37.0 years	19.3 years	18.2 years	19.8 years	32.7 years	23.9 years
Number (Percentage) of single parent households	67 (44%)	18 (64%)	9 (36%)	17 (68%)	2 (8.3%)	14 (56%)	7 (28%)
Race/Ethnicity							
Black/African American	62 (40.8%)	25 (89.3%)	0 (0%)	19 (76%)	0 (0%)	18 (72%)	0 (0%)
Hispanic/Latino	25 (16.5%)	0 (0%)	1 (4%)	0 (0%)	19 (76%)	4 (16%)	1 (4%)
Native American	21 (13.8%)	0 (0%)	21 (84%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
White	39 (25.7%)	2 (7.1%)	3 (12%)	6 (24%)	3 (12%)	2 (8%)	23 (92%)
Other	3 (2.0%)	0 (0%)	0 (0%)	0 (0%)	2 (8%)	1 (4%)	0 (0%)
Prefer not to answer	2 (1.3%)	1 (3.6%)	0 (0%)	0 (0%)	1 (4%)	0 (0%)	1 (4%)
Education level							
<8th Grade	10 (6.5%)	1 (3.6%)	0 (0%)	1 (4%)	7 (28%)	0 (0%)	1 (4%)
Some high school	22 (14.4%)	3 (10.7%)	2 (8%)	0 (0%)	8 (32%)	6 (24%)	3 (12%)
High school or GED	60 (39.2%)	13 (46.4%)	3 (12%)	15 (60%)	4 (16%)	15 (60%)	10 (40%)
Some college	41 (26.8%)	8 (28.6%)	12 (48%)	7 (28%)	3 (12%)	4 (16%)	7 (28%)
College degree	18 (11.8%)	3 (10.7%)	6 (24%)	2 (8%)	3 (12%)	0 (0%)	4 (16%)
>College	2 (1.3%)	0 (0%)	2 (8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Marital status							
Married/living with partner	62 (40.5%)	7 (25%)	9 (36%)	5 (20%)	22 (88%)	4 (16%)	15 (60%)
Never been married	53 (34.6%)	12 (42.9%)	10 (40%)	17 (68%)	0 (0%)	11 (44%)	3 (12%)
Divorced	19 (12.4%)	4 (14.3%)	3 (12%)	1 (4%)	2 (8%)	4 (16%)	5 (20%)

Separated	10 (6.5%)	2 (7.1%)	0 (0%)	2 (8%)	0 (0%)	4 (16%)	2 (8%)
Widowed	5 (3.3%)	2 (7.1%)	0 (0%)	0 (0%)	1 (4%)	2 (8%)	0 (0%)
Prefer not to answer	4 (2.6%)	1 (3.6%)	3 (12)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
100% Federal Poverty Level or Less	96 (63.0%)	2 (7.1%)	0 (0%)	0 (0%)	1 (4%)	2 (8%)	0 (0%)
Program Participation							
SNAP	112 (73.2%)	25 (89.3%)	19 (76%)	21 (84%)	16 (64%)	18 (72%)	13 (52%)
WIC	50 (43.7%)	9 (32.1%)	8 (32%)	9 (36%)	10 (40%)	8 (32%)	6 (24%)
Free or reduced price lunch or breakfast	107 (70.0%)	21 (75%)	18 (72%)	21 (84%)	21 (84%)	9 (36%)	17 (68%)
Free groceries or meals*	50 (43.7%)	7 (25%)	9 (36%)	12 (48%)	10 (40%)	2 (8%)	10 (40%)
FDPIR	2 (1.3%)	n/a	2 (8%)	n/a	n/a	n/a	n/a
Medicaid	126 (58.3%)	23 (82.1%)	24 (96%)	22 (88%)	22 (88%)	18 (72%)	17 (68%)
TANF	16 (7.4%)	n/a	6 (24%)	3 (12%)	3 (12%)	2 (8%)	1 (4%)
WorkFirst	8 (3.7%)	n/a	n/a	5 (20%)	3 (12%)	n/a	n/a
Unemployment benefits	4 (1.85%)	n/a	n/a	2 (8%)	1 (4%)	n/a	1 (4%)
Social Security/ Disability Benefits	27 (12.5%)	8 (28.6%)	2 (8%)	6 (24%)	1 (4%)	6 (24%)	4 (16%)
Other**	47 (29.4%)	10 (35.7%)	6 (24%)	7 (28%)	1 (4%)	2 (8%)	6 (24%)
None	1 (0.7%)	n/a	1 (4%)	1 (4%)	2 (8%)	3 (12%)	7 (28%)
Food Security Status***							
High or marginal food security	29 (19.0%)	5 (17.9%)	7 (28.0%)	5 (20.0%)	4 (16.0%)	2 (8.0%)	4 (16.0%)
Low food security	75 (49.0%)	15 (53.6%)	13 (52.0%)	7 (28.0%)	14 (56.0%)	14 (56.0%)	12 (48.0%)
Very low food security	49 (32.0%)	8 (28.6%)	5 (20.0%)	13 (52.0%)	7 (28.0)	9 (36.0%)	7 (28.0%)
“Within the past 12 months, we worried whether our food would run out before we got more money to buy more.”							
Never true	10 (6.8%)	5 (17.9%)	3 (12%)	2 (8%)	0 (0%)	0 (0%)	0 (0%)
Sometimes true	104 (69.3%)	15 (53.6%)	18 (72%)	14 (56%)	20 (80%)	16 (64%)	21 (84%)
Often true	36 (24.0%)	8 (28.6%)	4 (16%)	9 (36%)	3 (12%)	9 (36%)	3 (12%)
Did not answer	3 (2.0%)	0 (0%)	0 (0%)	0 (0%)	2 (8%)	0 (0%)	1 (4%)

“Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”							
Never true	24 (16.0%)	0 (0%)	10 (40%)	6 (24%)	2 (8%)	2 (8%)	4 (16%)
Sometimes true	98 (65.3%)	19 (67.9%)	13 (52%)	12 (48%)	19 (76%)	17 (68%)	18 (72%)
Often true	28 (18.7%)	9 (32.1)	2 (8%)	7 (28%)	2 (8%)	6 (24%)	2 (8%)
Did not answer	3 (2.0%)	0 (0%)	0 (0%)	0 (0%)	2 (8%)	0 (0%)	1 (4%)
“I/we couldn’t afford to eat balanced meals.”							
Never true	30 (20.3%)	5 (17.9%)	7 (28%)	5 (20%)	3 (12%)	4 (16%)	6 (24%)
Sometimes true	95 (64.2%)	17 (60.7%)	13 (52%)	16 (64%)	16 (64%)	17 (68%)	16 (64%)
Often true	23 (15.5%)	5 (17.9%)	5 (20%)	4 (16%)	4 (16%)	3 (12%)	2 (8%)
Did not answer	5 (3.3%)	1 (3.6%)	0 (0%)	0 (0%)	2 (8%)	1 (4%)	1 (4%)
“In the last 12 months, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn’t enough money for food?”							
Yes	68 (47.6%)	13 (46.4%)	6 (24%)	16 (64%)	13 (52%)	12 (48%)	8 (32%)
No	75 (52.5%)	14 (50%)	19 (76%)	8 (32%)	11 (44%)	11 (44%)	12 (48%)
Did not answer	10 (6.5%)	1 (3.6%)	0 (0%)	1 (4%)	1 (4%)	2 (8%)	5 (20%)
“If yes, how often did this happen?”							
Almost every month	22 (31.9%)	3 (10.7%)	2 (8%)	10 (40%)	2 (8%)	3 (12%)	2 (8%)
Some months but not every month	35 (50.7)	10 (35.7%)	3 (12%)	3 (12%)	6 (24%)	7 (28%)	6 (24%)
Only 1 or 2 months	11 (17.0%)	3 (10.7%)	1 (4%)	2 (8%)	4 (16%)	2 (8%)	0 (0%)
“In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food?”							
Yes	74 (48.7%)	11 (39.3%)	10 (40%)	18 (72%)	9 (36%)	14 (56%)	12 (48%)
No	72 (47.5%)	17 (60.7%)	14 (56%)	6 (24%)	14 (56%)	10 (40%)	11 (44%)
Do not know	6 (4.0%)	0 (0%)	1 (4%)	1 (4%)	1 (4%)	1 (4%)	2 (8%)
Did not respond	1 (1.3%)	0 (0%)	0 (0%)	0 (0%)	1 (4%)	0 (0%)	0 (0%)
“In the last 12 months, were you ever hungry but didn’t eat because there wasn’t enough money for food?”							
Yes	49 (33.1%)	7 (25%)	6 (24%)	11 (44%)	6 (24%)	11 (44%)	8 (32%)
No	99 (66.9%)	21 (75.0%)	19 (76%)	10 (40%)	18 (72%)	14 (56%)	17 (68%)
Did not respond	5 (3.2%)	0 (0%)	0 (0%)	4 (16%)	1 (4%)	0 (0%)	0 (0%)

*The full question in the eligibility screener was: “Free groceries or meals from a food pantry, food bank, church, or other place that helps with free food.”

**Other included specific names of programs.

***Calculated using the USDA’s 6-item food insecurity screener: <https://www.ers.usda.gov/media/8282/short2012.pdf>

References

- ¹ U.S. Department of Agriculture, Economic Research Service. "Rural Economy". <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/rural-economy/>. 2019.
- ² U.S. Department of Agriculture, Economic Research Service. Rural Health and Well-Being. <https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/>. 2019.
- ³ U.S. Department of Agriculture, Economic Research Service. What Is Food Security? <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx>. Accessed September 11, 2019.
- ⁴ Cook JT, Frank DA, Levenson SM, et al. Child food insecurity increases risks posed by household food insecurity to young children's health. *The Journal of Nutrition*. 2006;136(4):1073-1076.
- ⁵ Berkowitz SA, Karter AJ, Corbie-Smith G, et al. Food Insecurity, Food "Deserts," and Glycemic Control in Patients With Diabetes: A Longitudinal Analysis. *Diabetes Care*. 2018;41(6):1188-1195. doi: 10.2337/dc17-1981 [doi].
- ⁶ Howard LL. Does food insecurity at home affect non-cognitive performance at school? A longitudinal analysis of elementary student classroom behavior. *Economics of Education Review*. 2011;30(1):157-176.
- ⁷ U.S. Department of Agriculture, Economic Research Service. "Household Food Security in the United States in 2018." <https://www.ers.usda.gov/publications/pub-details/?pubid=94848>.
- ⁸ Morton LW, Blanchard TC. Starved for access: life in rural America's food deserts. *Rural Realities*. 2007;1(4):1-10.
- ⁹ Thomas BJ. Food deserts and the sociology of space: distance to food retailers and food insecurity in an urban American neighborhood. *International Journal of Human and Social Sciences*. 2010;5(6):400-409.
- ¹⁰ Garasky S, Morton LW, Greder KA. The food environment and food insecurity: Perceptions of rural, suburban, and urban food pantry clients in Iowa. *Family Economics and Nutrition Review*. 2004;16(2):41.
- ¹¹ Morris PM, Neuhauser L, Campbell C. Food security in rural America: a study of the availability and costs of food. *Journal of Nutrition Education*. 1992;24(1):52S-58S.
- ¹² Morton LW, Bitto EA, Oakland MJ, Sand M. Accessing food resources: Rural and urban patterns of giving and getting food. *Agriculture and Human Values*. 2008;25(1):107-119.
- ¹³ Bailey JM. Supplemental Nutrition Assistance Program and Rural Households. *Center for Rural Affairs. Rural Family Economic Security Project*. 2014; <http://files.cfra.org/pdf/snap-and-rural-households.pdf>.
- ¹⁴ Smith K. Fewer Than Half of WIC-Eligible Families Receive WIC Benefits. 2016; Carsey Research. Issue Brief #102.
- ¹⁵ Gundersen C, Dewey A, Hake M, Engelhard E, Crumbaugh AS. Food Insecurity across the Rural-Urban Divide: Are Counties in Need Being Reached by Charitable Food Assistance? *Annals of American Academy of Political and Social Science*. 2017;672(1):217-237.
- ¹⁶ Loopstra R, Tarasuk V. Severity of household food insecurity is sensitive to change in household income and employment status among low-income families. *The Journal of Nutrition*. 2013;143(8):1316-1323.
- ¹⁷ Morton LW, Bitto EA, Oakland MJ, Sand M. Solving the problems of Iowa food deserts: Food insecurity and civic structure. *Rural Sociology*. 2005;70(1):94-112.
- ¹⁸ Walker RE, Keane CR, Burke JG. Disparities and access to healthy food in the United States: A review of food deserts literature. *Health Place*. 2010;16(5):876-884. doi: 10.1016/j.healthplace.2010.04.013 [doi].