



U.S. DEPARTMENT OF AGRICULTURE

Third National Survey of WIC Participants (NSWP-III)

BRIEF REPORT 5: WIC PARTICIPANT CHARACTERISTICS AND ECONOMIC STATUS



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ABSTRACT

Background: The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a key part of the nation's public health infrastructure, providing nutritious supplemental foods, nutrition education, breastfeeding support, and referrals to health and social service programs for low-income pregnant and postpartum women, infants, and children up to age 5 who are at nutritional risk. The National Survey of WIC Participants (NSWP) series is designed to provide national estimates of WIC participants, State agencies' (SAs) and local agencies' (LAs) characteristics, and improper payments resulting from participant certification errors in WIC. NSWP is conducted approximately every 10 years. This brief is part of a series of 10 briefs that describe findings from the NSWP-III study, which collected data in 2019.

Objective: This brief provides information on WIC participants' household size and ages of children in the household, income levels, food security status, and use of WIC food benefits.

Methods: Data were collected from the following sources during the summer and fall of 2019: an in-person, nationally representative survey that was administered to recently certified (within 8 weeks of certification) WIC participants (weighted $n = 893,469$; unweighted $n = 1,697$) and a nationally representative survey completed by current WIC participants that was administered either in person or over the telephone (weighted $n = 6,397,412$; unweighted $n = 1,648$).

Findings:

- Most WIC households (80.3 percent) consisted of two to five people.
- Overall, participants' median monthly household income was \$1,330.52, and the mean was \$1,904.42.
- The majority (78.1 percent) of WIC participants were classified as high food security, followed by 10.6 percent that were identified as low food security, 9.2 percent that were identified as marginal food security, and a small percentage (2.1 percent) that were classified as very low food security.
- More than half of WIC participants (57.0 percent) reported that they purchased all WIC foods in their food package. Of the participants who did not purchase all food items in their food package (42.4 percent), the primary reason cited by 63.7 percent of participants was that the participant did not like those food items.
- Significantly more ($p < 0.05$) participants reported purchasing all WIC food items in 2019 compared to participants in 2009 (57.0 percent versus 21.2 percent, respectively).
- The top factors rated by WIC participants as very important in their decision to purchase a food item included nutritional content (84.0 percent), availability in the store (78.2 percent), and taste (75.8 percent).

Conclusion: Understanding WIC participants' characteristics and experiences with food benefit utilization is critical to WIC's lasting presence as one of the nation's vital supplemental nutrition programs. The study findings suggest positive changes to WIC participant satisfaction with the food package due to more WIC participants redeeming all of their WIC food benefits in 2019 compared to 2009.

INTRODUCTION

Background

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a key part of the nation's public health infrastructure, providing nutritious supplemental foods, nutrition education, breastfeeding support, and referrals to health and social services programs for low-income pregnant and postpartum women, infants, and children up to age 5 who are at nutritional risk. The United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) administers WIC by providing Federal grants to 89 State agencies (SAs), including 50 States and the District of Columbia; 33 Indian Tribal Organizations (ITOs); and the 5 U.S. Territories of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

SAs are responsible for the effective and efficient administration of WIC in accordance with Federal regulations.¹ In addition, SAs are responsible for guiding their local agencies (LAs) on all aspects of program operations, including allocating funds, extending technical assistance, and providing oversight for LA compliance with Federal regulation and SA policies and procedures. LAs provide WIC participants with locations where they can apply for WIC benefits, engage with qualified WIC staff to determine eligibility, and complete the certification process to receive a food benefit package that meets their nutritional needs.²

In 2019, the average monthly WIC participation was 6.4 million participants nationwide.³ Notably, almost half (45 percent) of the infants in the United States participated in WIC in 2017.⁴ By redeeming WIC food benefits at authorized retailers, such as grocery stores, WIC participants are supporting the local economy through their purchases.

The National Survey of WIC Participants (NSWP) series is designed to provide information on the characteristics of nationally representative sample of WIC participants, SAs, and LAs, and to produce estimates of improper payments resulting from participant certification errors in WIC. The first NSWP study was conducted in 1998, and NSWP-II was conducted in 2009.^{5,6}

For the current study, NSWP-III, information was collected from two nationally representative samples of WIC participants during the summer and fall of 2019. The Program Experiences Survey (PES) focused

¹ Government Publishing Office. (2020). *Electronic Code of Federal Regulations 7 CFR Part 246*. https://www.ecfr.gov/cgi-bin/text-idx?SID=a6828ac000f6e75ae4679d5beecb637c&mc=true&node=pt7.4.246&rgn=div5#se7.4.246_13

² U.S. Department of Agriculture, Food and Nutrition Service. (2019, October). *About the WIC program*. <https://www.fns.usda.gov/wic/state-agency>

³ U.S. Department of Agriculture, Food and Nutrition Service. (2019). *WIC Program: National level annual summary*. <https://fns-prod.azureedge.net/sites/default/files/resource-files/wisummary-6.pdf>

⁴ U.S. Department of Agriculture, Food and Nutrition Service. (2019). *National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2017*. <https://www.fns.usda.gov/wic/national-and-state-level-estimates-wic-eligibility-and-wic-program-reach-2017>

⁵ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. (2001). *National Survey of WIC Participants: Final report*. Alexandria, VA.

⁶ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. (2012). *National Survey of WIC Participants II*. Alexandria, VA.

on WIC participant satisfaction and experiences with WIC, food security status, and use of other benefit programs. The Certification Survey (CS) focused on documenting WIC participants' identity, residency, certification category, and income eligibility.

Research Objective and Questions

One component of NSWP-III is to provide information on the WIC participant characteristics and economic status.⁷ Specifically, this brief report addresses the following research questions:

Household Characteristics

- What are the characteristics of the WIC participant's family/economic unit (e.g., size, ages of children, and relationships of adults to infants and children who are WIC-eligible, regardless of multigenerational status)?
- Is any member of the WIC household currently enlisted in the military? If so, which members, and do the enlisted members of the household currently reside with the rest of the household members?

Economic Status

- What are the income levels, overall and for each certification category, for certified WIC participants, including those adjunctively or automatically income eligible?
- What is the WIC participant's and family/economic unit's income, including military income (include income for adjunctively or automatically income eligible WIC participants)?
- What is the applicant's monthly and annual family/economic unit income, including military income, at time of certification?
- What is the WIC participant's current monthly and annual family/economic unit income at the time of their interview, including military income?

Food Security Status

- To what extent are the participant and the participant's household considered "food secure," as measured by an FNS-approved valid measure of food security?
- What participant characteristics are the strongest predictors of food insecurity for WIC participants?
- Are there significant differences in characteristics between food-secure and food-insecure WIC participants?

Utilization of WIC Benefits

- Did they use all the food instruments (or EBT benefits) that they picked up during their certification period? If not, why not, and how did they decide which food instrument(s) (or EBT benefits) not to use?

⁷ Please visit the FNS website at <https://www.fns.usda.gov/research-analysis> to access the other NSWP-III brief reports and the prior NSWP studies.

- Did they buy all the food items listed on the food instruments (or EBT benefits) in the quantities prescribed? If not (i.e., if they did a “partial buy”), which food items were not bought and why not?
- In the participant’s opinion, what factors influence their choice of food items purchased?

Report Organization

The following sections of this brief report detail the findings related to the research questions referenced above. The report concludes with a summary of key findings and discussion of the study limitations and recommendations for future research. The report also references appendices that include technical details of the survey methodology, a copy of the surveys, and analytic tables.

STUDY METHODOLOGY

Source of Data

The findings in this brief are based on data collected from two NSWP-III surveys during the summer of 2019. Table 1 lists the surveys fielded and associated operational details.

Table 1. NSWP-III Survey Summary

Survey	Type of Sample	Mode of Data Collection	Estimated Length of Survey ^a	Data Collection Period	Number of Completed Instruments	Response Rate ^b
PES	National sample	In-person and telephone survey ^c	30 minutes	June 23, 2019–November 10, 2019	1,648	36.2%
CS	National sample	In-person survey	42 minutes	June 23, 2019–November 10, 2019	1,697	34.3%

^a Estimated length of survey is based on estimates developed during pretesting the survey instrument.

^b Response rate equals the number of completed cases divided by the sum of the number of completed cases, number of refusal cases, and nonrespondents.

^c Field interviewers administered the PES in person if the respondent was also sampled to complete the CS. Telephone interviewers administered the PES by telephone if the respondent was sampled only for the PES.

Survey Content

The PES and CS instruments were developed in collaboration with FNS and were reviewed by an independent panel that included experts in WIC policy and operations. In addition, each survey was pilot tested with nine respondents to assess the ease of comprehension (e.g., confusing wording or layout, failure to grasp concepts) and length of time to complete. Topics included in each survey are shown in Table 2.

Table 2. Topics Included in the NSWP-III Surveys

Survey	Topics Included
PES (Appendix B)	- WIC participation (new or prior participation) - Reasons for leaving WIC if participated previously - Participant satisfaction with WIC services, staff, and benefits - Farmer's Market Nutrition Program participation - Use of WIC food benefits - Food security - Participation in other programs
CS (Appendix D)	- Identity and residency documentation - Household size and composition - Employment and income sources

For the PES, the majority of the questions were close-ended; however, there were some open-ended questions asking about what WIC could have done differently. There also were some questions that had predetermined response options in addition to “other specify.” The interviewer was instructed not to read those options aloud but instead let the respondent answer freely. If the respondent did not provide a response that matched the predetermined response options, the interviewer collected that information under the “other specify” option. The Study Team coded those responses thematically. For additional details and copies of the instruments, please see Appendix B.

Analysis

WEIGHTING

The PES data were weighted to represent the 2019 population of WIC participants, and the CS data were weighted to represent the population of recently certified WIC participants. As such, the weighted descriptive PES results are representative of all 6,397,412 WIC participants nationally, and the weighted descriptive CS results are representative of all 893,469 recently certified WIC participants nationally in 2019. The population of WIC participants, grouped by certification category and FNS Region, was used and was derived from the fiscal year (FY) 2019 Monthly Data State Level Participation by Category and Program Cost, Estimated from October 2018–September 2019, as of December 4, 2019.⁸ Please see Appendix B and Appendix D for more details.

SURVEY RESULTS

To understand the differences among respondents, data were analyzed according to relevant subgroups as shown in Table 3.

Table 3. Subgroups Examined for Each NSWP-III Survey

Survey	Subgroups Examined
PES (Appendix G)	- WIC certification category (pregnant, breastfeeding, postpartum, infant, child) - Race/ethnicity (Hispanic, Non-Hispanic white, Non-Hispanic African American, Non-Hispanic other) - Education level (less than high school, high school/GED, more than high school) - Whether the household has children⁹ - Food security status (high food security, marginal food security, low food security, very low food security) - Home language (English, Spanish, other)
CS (Appendix I)	- Number of participants served by the entire SA per month (up to 10,000; 10,000 to 75,999; 75,000 or more) - The number of participants served per month by the entire agency (up to 750; 750 to 1,999; 2,000 to 4,499; 4,500 or more) - Relationship of the LA to the parent SA (State affiliated, Local government, Non-government) - LA's urbanicity (completely rural, mostly rural, completely urban)

⁸ U.S. Department of Agriculture, Food and Nutrition Service. (2020, July). *WIC Data Tables*. <https://www.fns.usda.gov/pd/wic-program>

⁹ Participants whose certification category was pregnant and indicated at PES question 2 that this was their first, only child were categorized as living in a household without children. All other participants were categorized as living in a household with children.

Survey	Subgroups Examined
	▪ Location based on the FNS Region (Mid-Atlantic, Midwest, Mountain Plains, Northeast, Southeast, Southwest, Western) ▪ WIC certification category (pregnant, breastfeeding, postpartum, infant, child) ▪ Race/ethnicity (Hispanic, Non-Hispanic white, Non-Hispanic African American, Non-Hispanic other) ▪ Size of the family/economic unit ▪ Whether the household has children¹⁰ ▪ Home language (English, Spanish, other) ▪ Adjunctive income status

PES and CS results are presented as weighted percentages and means. Tables with comparisons to NSWP-I (conducted in 1998) and NSWP-II (conducted in 2009) were prepared when feasible (i.e., when similar questions were asked of both studies) and can be found in Appendix G (PES data) and Appendix I (CS data). Two-tailed *t*-tests were conducted to determine whether there were differences in the estimates between the two survey years at a 5 percent level of significance.

NONRESPONSE BIAS ANALYSIS

The Office of Management and Budget (OMB) recommends nonresponse bias analysis any time the survey response rate is less than 80 percent. The PES achieved a 36.2 percent response rate, and the CS achieved a 34.3 response rate, so nonresponse bias analyses were conducted to determine whether there were respondent characteristics significantly associated with nonresponse that may have potentially introduced bias into the surveys. Conducting a nonresponse bias analysis requires that the characteristics examined be available for both respondents and nonrespondents.¹¹ Therefore, the Study Team reviewed the sampling frame, which came from administrative data provided by States, to identify variables that were available for all respondents sampled for the survey. Language spoken at home and WIC certification category were identified as statistically significant factors associated with the participants' likelihood to complete the PES. FNS Region, certification category, and race/ethnicity were identified as statistically significant factors associated with a participant's likelihood of completing the CS. These variables were then used to calculate adjustment factors to represent those who did not respond to the survey.

As per OMB guidelines, an item nonresponse analysis should be conducted if item response rate is less than 70 percent.¹¹ Item nonresponse bias analysis was not applicable to the PES or the CS because a response was required on all questions.

¹⁰ Households with child or infant participants and those with at least one member under 18 years listed in the household roster were categorized as households with children. Households with adult participants and no members under 18 years listed in the roster were categorized as households without children.

¹¹ Office of Management and Budget. (2006, September). *Office of Management and Budget: Standard guidelines for statistical surveys*. https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/statpolicy/standards_stat_surveys.pdf.

MAIN FINDINGS

Participant Characteristics

HOUSEHOLD CHARACTERISTICS

Current WIC participants were asked a series of questions related to their household characteristics, such as household size, ages of children, and relationship between the household members (Table 4). For this study, household is defined as a group of related or nonrelated individuals who are living together as one economic unit with shared income and expenses.

The majority of WIC households (80.3 percent) consisted of two to five people. The remaining 20 percent included households with one member (1.3 percent), between six and eight members (17.0 percent), and nine or more members (1.4 percent).

As expected, a large proportion of households consisted of infants and children up to age 5, aligning with the WIC eligibility requirements for infants and children.¹² Approximately half of the households included at least one child younger than 1 year (52.1 percent) and around one-fifth of households included children aged 1 year old (23.1 percent), 2 years old (22.6 percent), 3 years old (23.1 percent), or 4 years old (21.1 percent) (Table 4).¹³ Fewer households included 5-year-old children (12.8 percent) compared to households that included 17-year-old children (3.9 percent) (Appendix I, Table 7a).

The survey also collected information on the relationship of all adult household members to infant and child WIC participants. Almost all infant and child participants (95.4 percent) were living in households where one of the adults was their parent. A large proportion of households with infant and child participants (72.9 percent) also included other adult relatives such as brothers, sisters, and cousins (Table 4).

The survey also assessed the military status of household members. Overall, 2.0 percent of participants reported that someone in their household was receiving military pay. Of those participants, 0.1 percent reported that they themselves were enlisted, 1.1 percent reported that their parent was currently enlisted, and 0.7 percent reported that their spouse was currently enlisted. In addition, 2.0 percent of households included enlisted military members who currently resided with the participant (Appendix I, Table 7a).

¹² U.S. Department of Agriculture, Food and Nutrition Service. 2020. "WIC Eligibility Requirements." <https://www.fns.usda.gov/wic/wic-eligibility-requirements>

¹³ Households may include multiple children. Percentages will not sum to 100.

Table 4. Characteristics of WIC Participant Households

Characteristics	Percentage
Size of Household	
1	1.3
2	14.0
3	23.6
4	24.7
5	17.9
6	8.6
7	6.0
8	2.4
9 or more	1.4
Ages of Infants and Children¹	
Up to 1 year	52.1
1 year	23.1
2 years	22.6
3 years	23.1
4 years	21.1
Relationship of Adult Household Members to Infant and Child Participants²	
Parent	95.4
Step-parent	3.1
Legal guardian	0.9
Grandparent	20.0
Uncle/Aunt	13.5
Foster parent	1.5
Other relative ³	72.9

¹ Households may include multiple children. Percentages will not sum to 100. For percentage of children older than 4 years, please see Appendix I, Table 7a.

² Includes all adults in the household. Relationship is in reference to the infant/child participant.

³ Includes brother/sister, cousin, brother-in-law/sister-in-law, and other relative unspecified.

Notes: The number of respondents varied by characteristic. For size of household, weighted $n = 893,469$; unweighted $n = 1,697$. For ages of infants and children, weighted $n = 893,469$; unweighted $n = 1,697$. For relationship of adult household member to infant and child participants, weighted $n = 566,577$; unweighted $n = 681$.

Source: Appendix I, Table 7a; NSWP-III Certification Survey (Income Eligibility Section, pages 15-40).

ECONOMIC STATUS

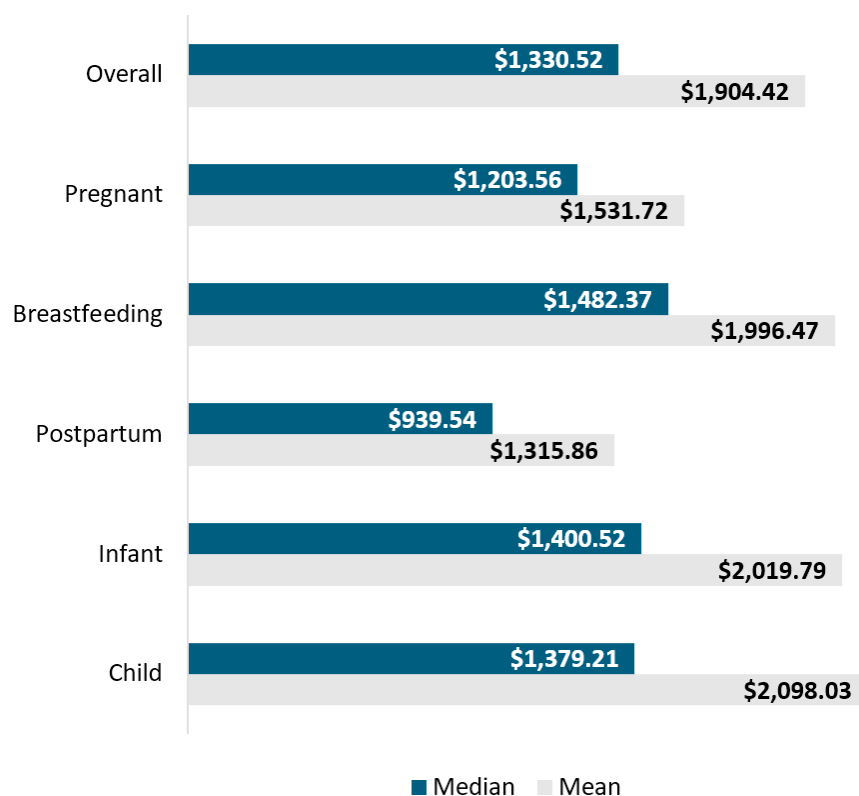
The survey included a series of questions to assess the household income of the WIC participants. WIC participants were asked about all potential sources of income, such as wages, salaries, self-employment income, military pay, and Social Security benefits, for all members of the household. For each applicable income source, the respondent was asked to provide documented proof of their income.

The survey also asked if WIC participants were income eligible for WIC due to their participation in an adjunctive or automatic income eligibility program. If so, respondents were asked to provide proof of program participation. Supplemental Nutrition Assistance Program (SNAP), Medicaid, and Temporary Assistance for Needy Families (TANF) are programs that confer adjunct income eligibility for WIC, and all SAs are required to accept these programs per the WIC regulations. SAs have the option to establish automatic income eligibility for WIC based on participation in other State-administered programs, provided those programs have income eligibility guidelines at or below the SA's WIC income

guidelines.¹⁴ Programs that can qualify a person for WIC automatic income eligibility include the Food Distribution Program on Indian Reservations (FDPIR), Children’s Health Insurance Program (CHIP), Supplemental Security Income (SSI), Low Income Home Energy Assistance Program (LIHEAP), and the National School Lunch Program (NSLP) and School Breakfast Program (SBP).¹⁵

Overall, participants’ median monthly household income was \$1,330.52 and the mean was \$1,904.42 (Exhibit 1).¹⁶ Across certification categories, the lowest mean income was \$1,315.86 with a median of \$939.54 for households of postpartum participants, and the highest mean was \$2,098.03 with a median of \$1,379.21 for households of child participants. These values include income for all participants, including those determined to be adjunctively or automatically income eligible.

Exhibit 1. Monthly Household Income of WIC Participants, Overall and by Certification Category



Notes: The number of respondents varied by certification category. For overall, weighted $n = 893,469$; unweighted $n = 1,697$. For pregnant, weighted $n = 146,169$; unweighted $n = 346$. For breastfeeding, weighted $n = 99,815$; unweighted $n = 337$. For postpartum, weighted $n = 80,908$; unweighted $n = 333$. For infant, weighted $n = 214,581$; unweighted $n = 336$. For child, weighted $n = 351,996$; unweighted $n = 345$.

Source: Appendix I, Table 2a.1; NSWP-III Certification Survey (Income Eligibility Section, pages 15–40).

¹⁴ U.S. Department of Agriculture, Food and Nutrition Service. (2020). *WIC eligibility requirements*. <https://www.fns.usda.gov/wic/wic-eligibility-requirements>

¹⁵ For findings related to adjunctive and automatic income eligibility requirements for WIC, please see *Brief Report 1: WIC State Agency Policies and Practices*.

¹⁶ The median values are included in addition to the mean values because the median household income provides a more representative income of the sample, as the median household income is not influenced by extremely low- or high-income values.

The study also compared the participants' income at the time of their most recent WIC certification appointment¹⁷ to their reported income at the time of the survey. At the time of certification, the participants' median monthly income was \$1,989.69 and annual income was \$23,876.26. At the time of the interview, which was conducted between 2 weeks and 8 weeks after the certification appointment, participants' median monthly income was \$2,018.96 and their annual income was \$24,227.51 (Appendix I, Table 7b). Please note that these values exclude income from adjunctive or automatic income eligible participants. During the WIC certification process, these participants did not have to provide proof of income documentation since, instead, they provided proof of participation in one of the adjunctive or automatic income eligibility programs. Thus, the Study Team was tasked with providing income amounts with and without adjunctive or automatically income eligible participants.

FOOD SECURITY STATUS

To measure participants' access to sufficient foods, the survey asked WIC participants questions that measured their household food security levels. Food security is a state of a household having unhindered access to safe and nutritionally adequate foods and meals. The varying levels of food security are dependent upon the extent of limitations or restrictions that affect the households' ability to have reliable food access. This study used USDA's food security measure, which identifies food security by the following classifications¹⁸:

- High food security: no reported indications of food-access problems or limitations.
- Marginal food security: one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.
- Low food security: reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
- Very low food security: reports of multiple indications of disrupted eating patterns and reduced food intake.

All survey respondents were asked a baseline question in which they were asked to think about their household and choose the best fitting statement regarding how their family generally eats. Participants identified whether their household had enough food, *sometimes* did not have enough food, or *often* did not have enough food in the last 12 months. When a participant identified that they sometimes or often did not have enough food, they were then prompted to answer a series of questions that determined the degree of food security.

The majority (78.1 percent) of WIC participants were classified as high food security, followed by 10.6 percent who were classified as low food security, 9.2 percent who were identified as marginal food security, and 2.1 percent who were classified as very low food security (Appendix G, Table 7a.1).

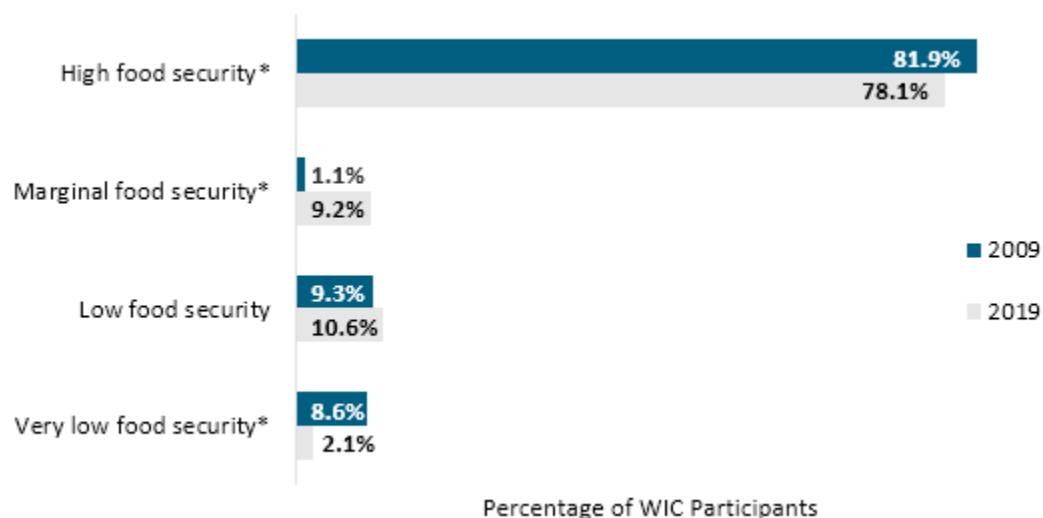
Between 2009 and 2019, several statistically significant ($p < 0.05$) differences in the distribution of food security levels were observed (Exhibit 2). First, the percentage of households with very low food security significantly decreased from 8.6 percent to 2.1 percent. In addition, the percentage of households with marginal food security significantly increased from 1.1 percent to 9.2 percent. The percentage of

¹⁷ Income amounts at the time of certification were provided from WIC SAs' administrative data.

¹⁸ U.S. Department of Agriculture, Economic Research Service. (2020, September). *Definitions of food security*. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>

households with high food security significantly decreased from 81.9 percent to 78.1 percent. Significant trends were also observed between 1998 and 2019 in which the percentage of households with low food security significantly increased from 6.7 percent to 10.6 percent and the percentage of households with marginal food security significantly decreased from 15.3 percent to 9.2 percent (Appendix G, Table 7a.2).

Exhibit 2. Food Security Status of WIC Participants in 2009 and 2019



* The difference between 2009 and 2019 is statistically significant ($p < 0.05$).

Notes: For 2009, the percentages reported are weighted, but the weighted n were not reported; unweighted $n = 1,210$. For 2019, weighted $n = 6,397,412$; unweighted $n = 1,648$. The difference between 2009 and 2019 is statistically significant ($p < 0.05$) across all levels of food security except low food security.

Source: Appendix G, Table 7a.2; NSWP-III Program Experiences Survey, questions 33–34E.

As for significant differences ($p < 0.05$) by characteristics of WIC participants, significantly more caregivers of infant participants (82.9 percent) reported high food security compared to caregivers of child participants (75.3 percent) in 2019. In addition, significantly more Spanish-speaking households (81.4 percent) had a high food security status compared to households speaking languages other than English or Spanish (63.9 percent). When results were segmented by whether the household has children, significantly more participants without children (84.7 percent) had high food security levels than participants with children in the household (77.9 percent) (Appendix G, Table 7a.1).

Significant differences by participant characteristics also were seen among those participants classified as having low food security. Significantly more participants with children in the household (10.7 percent) had low food security levels than participants without children in the household (6.8 percent). In addition, significantly more households speaking languages other than English or Spanish (20.6 percent) had low food security status compared to Spanish-speaking households (8.9 percent). No significant differences in low food security status were observed between households that speak English (10.4 percent) and other households (Appendix G, Table 7a.1).

Utilization of WIC Food Benefits

A key component of WIC benefits is the supplemental food packages provided to WIC participants. The food packages are designed to meet the nutritional needs of the different WIC certification categories (pregnant, breastfeeding, and postpartum women; and infants and children). In addition, the food packages align with the Dietary Guidelines for Americans and infant feeding practice guidelines of the American Academy of Pediatrics.¹⁹ For children and women participants, food packages include juice, milk, cereal, cheese, eggs, fruits, vegetables, whole wheat bread, canned fish, legumes, and peanut butter. However, the amount of food provided varies if the participant is a child or a pregnant, breastfeeding, or postpartum woman. The infant food packages include formula (if the infant is formula fed) and, starting at 6 months of age, infant cereal and fruit and vegetable baby foods. Fully breastfed infants also receive meat baby food starting at 6 months of age.²⁰ Participants can redeem these food benefits at authorized WIC retailers.

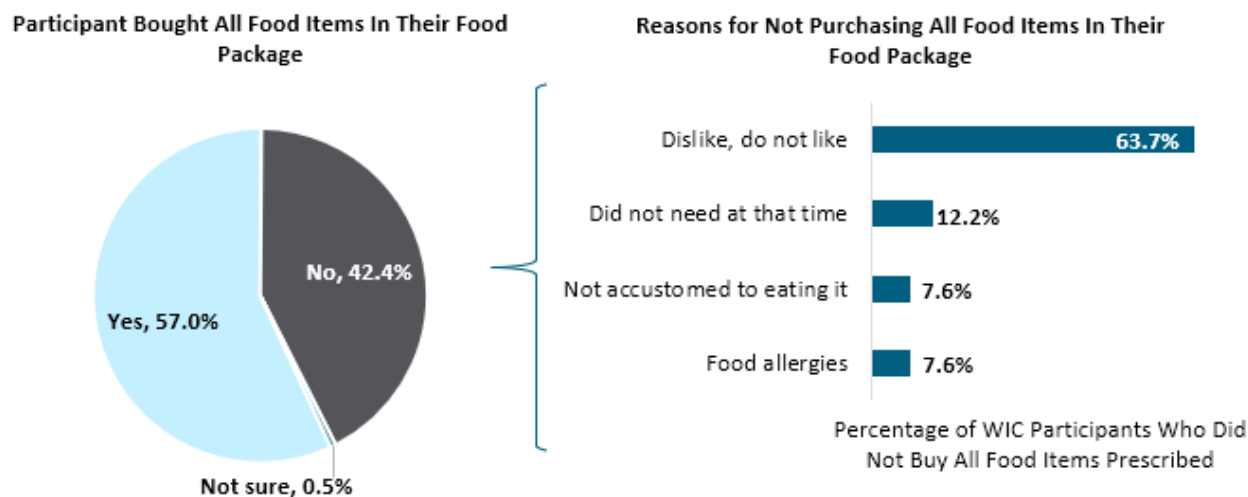
PURCHASING BEHAVIOR

Current WIC participants were asked several questions about their purchasing behavior with respect to WIC foods. More than half of WIC participants (57.0 percent) reported that they used benefits to purchase all WIC foods in their food package on a regular basis (Exhibit 3). Of the participants who did not purchase all food items in their food package (42.4 percent), the primary reason cited by 63.7 percent of participants was that the participant did not like those food items. The top five items not purchased for this reason included infant fruits and vegetables²¹ (80.8 percent); whole wheat bread (74.6 percent); canned fish (69.2 percent); tofu (65.5 percent); and dry beans, peas, and lentils (63.8 percent) (Appendix G, Table 4c.4). Other reasons participants reported for not purchasing all food items included not needing the food at the time (12.2 percent), not being accustomed to eating it (including cultural differences; 7.6 percent), and food allergies (7.6 percent). In addition, 8.9 percent of respondents reported other reasons for not purchasing all food items listed on the food instrument, which varied by food type. For example, for non-infant fruits and vegetables, 6.4 percent preferred fresh fruits and vegetables, but only frozen and canned were allowed. For infant cereal, 14.0 percent of participants indicated this food causes their baby constipation (Appendix G, Table 4c.2).

¹⁹ U.S. Department of Agriculture, Food and Nutrition Service. (2013, October). *WIC food packages*. <https://www.fns.usda.gov/wic/wic-food-packages>.

²⁰ U.S. Department of Agriculture, Food and Nutrition Service. (2013, November). *WIC food packages - maximum monthly allowances*. <https://www.fns.usda.gov/wic/wic-food-packages-maximum-monthly-allowances>

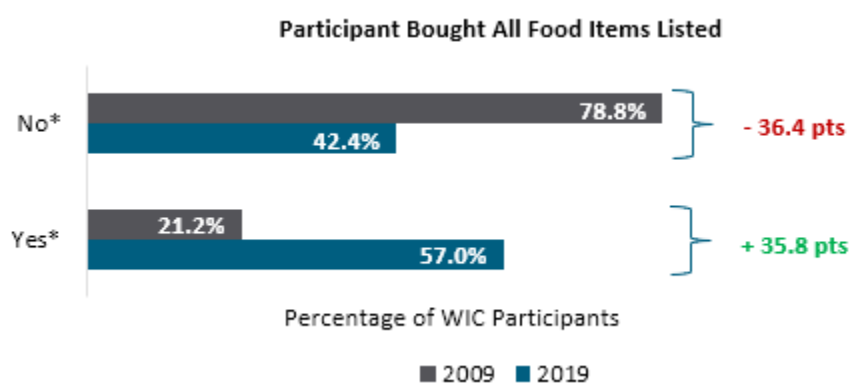
²¹ The child version of the survey asked about infant foods, but the adult version did not ask about infant foods. The question about infant foods was limited to respondents who indicated on the prior question that there were foods they did not purchase on a regular basis. After answering that question, the respondents were asked to specify which foods.

Exhibit 3. WIC Participants' Purchasing Behavior

Notes: Pie graph weighted $n = 6,397,412$; unweighted $n = 1,648$. Bar graph weighted $n = 2,713,627$; unweighted $n = 717$.

Source: Appendix G, Table 4c.1 and Table 4c.2; NSWP-III Program Experiences Survey, questions 19 and 20.

In 2019, significantly ($p < 0.05$) more participants reported purchasing all WIC food items compared with participants in 2009 (57.0 percent versus 21.2 percent, respectively). Another difference was observed between 2009 and 2019 when significantly ($p < 0.05$) more participants did not purchase certain WIC foods on a regular basis in 2009 (78.8 percent in 2009 and 42.4 percent in 2019) (Exhibit 4). In addition, compared to 2009, significantly ($p < 0.05$) more participants reported not purchasing milk because they did not like it (17.0 percent in 2009 and 52.2 percent in 2019), and significantly ($p < 0.05$) more participants reported not purchasing peanut butter because of food allergies (9.3 percent in 2009 and 20.0 percent in 2019) (Appendix G, Table 4c.4).

Exhibit 4. Participants Bought All Food Items Listed on the Food Instruments (or EBT Benefits) in 2009 and 2019

* Statistically significant ($p < 0.05$) difference.

Notes: For 2009, weighted $n = 9,213,739$; unweighted $n = 2,538$. For 2019, weighted $n = 6,397,412$; unweighted $n = 1,648$.

Source: Appendix G, Table 4c.3; NSWP-III Program Experiences Survey, question 19.

QUANTITY OF FOODS PURCHASED

The survey also included questions about how much of the WIC food benefits participants typically redeemed in a month, and more than half (58.6 percent) of WIC participants reported using all their food benefits each month while 41.1 participants reporting not using all of their benefits. A very small proportion of participants (0.3 percent) were unsure of how much of their benefits they used each month (Appendix G, Table 4b.1).

Participants also provided additional specifics regarding whether there was too much or too little of the WIC foods based on the participants' own opinion of what was too much or too little for themselves. Overall, most participants felt that there was not too much (79.8 percent) or too little (57.4 percent) of WIC foods, although some participants reported WIC offered too much milk (39.3 percent) and too few non-infant fruits and vegetables (50.3 percent) (Appendix G, Table 4b.2). Across certification categories, postpartum participants (32.1 percent) and caregivers of infant (22.3 percent) and child (44.5 percent) participants cited too much breakfast cereal. Additionally, caregivers of infant participants reported too little infant formula (39.7 percent) (Appendix G, Table 4b.2).²²

Between 2009 and 2019, significantly ($p < 0.05$) more participants reported that there was too much breakfast cereal and milk (26.1 percent and 33.9 percent, respectively). Additionally, since 2009, significantly ($p < 0.05$) more participants reported food benefits were too little across several different food items, including cheese (11.9 percent versus 16.8 percent), eggs (13.7 percent versus 18.9 percent), and infant formula (10.3 percent versus 19.3 percent) (Table 5).

Table 5. Quantity of WIC Food Items Purchased in 2009 and 2019

Food items	2009	2019
Too much of any food		
Breakfast cereal [‡] (%)	26.1	33.9
Peanut butter (%)	13.8	10.9
Milk [‡] (%)	22.5	39.3
Too little of any food		
Cheese [‡] (%)	11.9	16.8
Eggs [‡] (%)	13.7	18.9
Infant formula [‡] (%)	10.3	19.3
Juice [‡] (%)	13.4	8.6
Milk [‡] (%)	27.1	21.2
Total number of respondents (weighted <i>n</i>)	9,213,739	^
Total number of respondents (unweighted <i>n</i>)	2,538	^

[‡] The difference between 2009 and 2019 is statistically significant ($p < 0.05$).

[^] In 2019, the total number of respondents varied by certification category and whether too much or too little food was reported; see Table 4b.2 in Appendix G.

Notes: Only overlapping response options from each survey are shown above. For additional details, please see Appendix G, Table 4b.8.

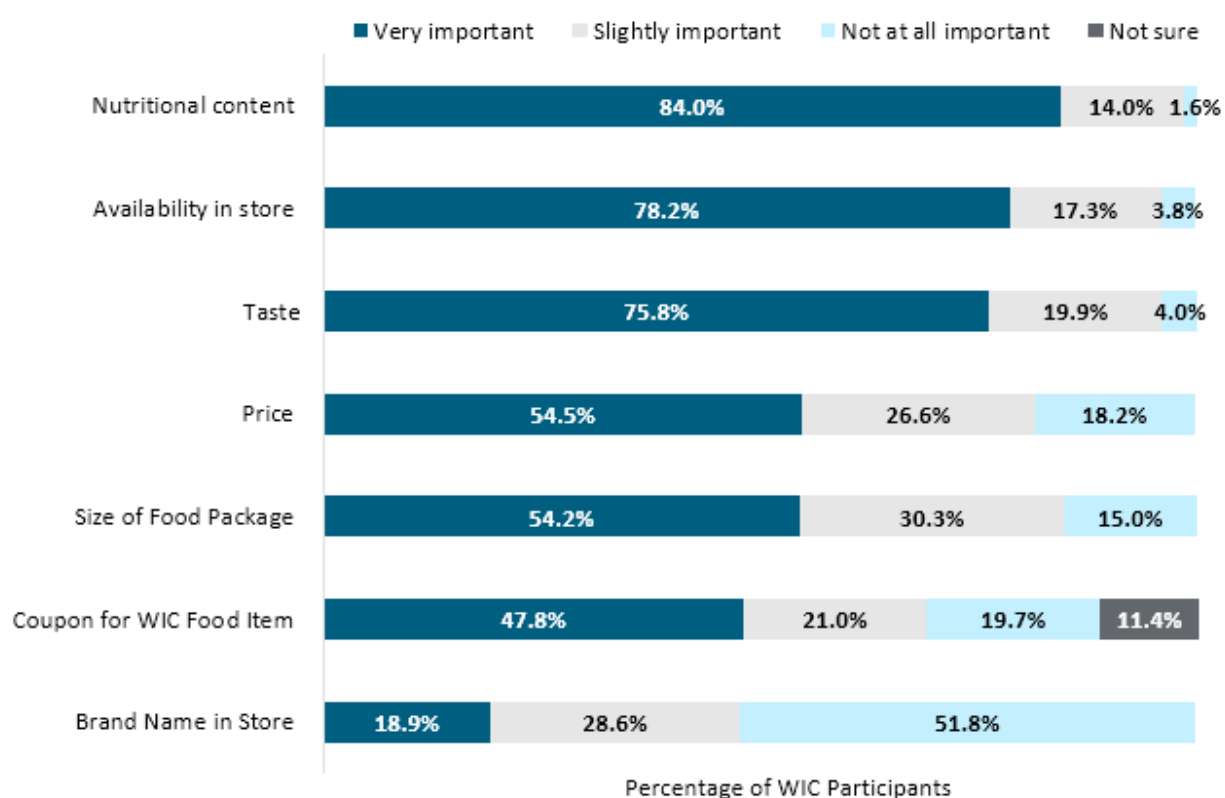
Source: Appendix G, Table 4b.8; NSWP-III Participant Experience Survey, questions 21, 21A, 22, and 22A.

²² More information on WIC food item quantities purchased can be seen in Appendix G, Tables 4b.2-7.

FACTORS THAT INFLUENCE PURCHASING

Respondents were asked to rate various factors that influence their choice of WIC food items purchased on a scale of very important, slightly important, or not at all important. The top factors that were rated as very important in their influence on WIC participants' decision to purchase a food item included nutritional content (84.0 percent), availability in the store (78.2 percent), and taste (75.8 percent) (Exhibit 5). Other factors that were rated as very important by approximately half of participants included price (54.5 percent), the size of food package (54.2 percent), and having a coupon for a WIC food item (47.8 percent). Brand name received the lowest rating of very important (18.9 percent) and received the highest rating of not at all important (51.8 percent) (Appendix G, Table 4d).

Exhibit 5. Factors that Influenced WIC Participants' Choice of WIC Food Items Purchased, by Degree of Importance



Notes: Weighted $n = 6,397,412$; Unweighted $n = 1,648$.

Source: Appendix G, Table 4d; NSWP-III Program Experiences Survey, question 20A.

CONCLUSION

Understanding WIC participants' characteristics and experiences with food benefit utilization is critical to WIC's lasting presence as one of the nation's vital supplemental nutrition programs. According to the study findings, a typical WIC household ranged from two to five people, and approximately half (52.1 percent) of these families included children under the age of 1 year. The average monthly income of WIC households was \$1,904.42, and the median income was \$1,330.52. In terms of food security, the majority (78.1 percent) of WIC participants were identified as having high food security, followed by those with low food security (10.6 percent), marginal food security (9.2 percent), and very low food security (2.1 percent).

More than half of participants reported redeeming (57.0 percent) all their food benefits on a regular basis. However, some participants reported receiving too much milk (39.3 percent) and, conversely, too few fruits and vegetables (50.3 percent). Of the participants who did not purchase all food items described (42.4 percent), the primary reason cited by 63.7 percent of participants was that the participant did not like those food items. The top five items not purchased for this reason included infant fruits and vegetables (80.8 percent)²³; whole wheat bread (74.6 percent); canned fish (69.2 percent); tofu (65.5 percent); and dry beans, peas, and lentils (63.8 percent). Notably, in 2019, significantly more participants reported purchasing all WIC food items compared with participants in 2009 (57.0 percent versus 21.2 percent, respectively). However, compared to 2009, significantly more participants reported not purchasing milk because they did not like it (17.0 percent in 2009 and 52.2 percent in 2019), and significantly more participants reported not purchasing peanut butter because of food allergies (9.3 percent in 2009 and 20.0 percent in 2019).

Future research could evaluate the potential of food package modifications or flexibilities to increase WIC participant satisfaction. In addition, focus groups could be conducted with LAs on best practices and challenges with increasing awareness of FMNP among WIC participants.

As with all research studies, limitations of the design and methodology are possible. The surveys were designed and tested to elicit accurate responses. Nevertheless, some response error is possible. Respondents may have unknowingly reported incorrect information or inadvertently checked the wrong response. In addition, ratings were not defined in the survey for questions with response options as rating scales, such as "all the time," "often," "occasionally," "seldom," and "never." Thus, respondents could have interpreted the meaning of the ratings differently.

²³ The child version of the survey asked about infant foods, but the adult version did not ask about infant foods. The question about infant foods was limited to respondents who indicated on the prior question that there were foods they did not purchase on a regular basis. After answering that question, the respondents were asked to specify which foods.

Prepared by Capital Consulting Corporation (CCC) and 2M Research Services for the USDA Food and Nutrition Service (Project Officer: Karen Castellanos-Brown)

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