

RESEARCH THAT MATTERS

FOOD INSUFFICIENCY AMONG TRANSGENDER ADULTS During the COVID-19 Pandemic

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OVERVIEW

Higher rates of food insecurity, inadequate or uncertain access to adequate food due to insufficient money or other resources,¹ have been observed among LGBT as compared to non-LGBT people.² However, little research has focused exclusively on food access for transgender people. This study aims to fill gaps in knowledge about current experiences of food insecurity among transgender people. More specifically, using data collected by the U.S. Census Bureau on the Household Pulse Survey between July 21 to October 11, 2021, this study analyzes food insufficiency, defined as sometimes or often not having enough to eat in the last 7 days.³ In this study, food insufficiency was three times as common among transgender as cisgender people (25.3% vs. 8.3%).

Food insufficiency was much more common among some groups than others. Nearly six times as many transgender people of color as cisgender White people (35.8% vs 6.0%) experienced food insufficiency at some point during the summer or early fall of 2021. More transgender adults with a bachelor's degree experienced food insufficiency than cisgender adults with a high school degree or less (22.1% vs 13.5%, respectively).

Pulse Survey data were further analyzed to provide information about current socioeconomic status, food resource utilization (e.g., SNAP, charitable food resources), and self-reported reasons for insufficient food among transgender adults (0.7%, 95% confidence interval (CI) 0.6, 0.8 of the analytic sample) and their cisgender counterparts. Only 30.7% of income-eligible transgender people were enrolled in SNAP. In addition, almost twice as many transgender people as cisgender people reported other barriers to accessing food, including that they could not get out to buy food (24.1% and 12.3%, respectively) and safety concerns (22.0% and 11.8%, respectively). Details about study methods, as well as tables, are included in the Appendix.

¹USDA Economic Research Service. (2021). *Food Security in the U.S.: Measurement: What is Food Insufficiency?* <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/#insufficiency> Accessed November 2021.

² Brown, T.N.T., Romero, A.P., & Gates, G.J. (2016). *Food Insecurity and SNAP Participation in the LGBT community*. The Williams Institute, UCLA, Los Angeles, CA. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/Food-Insecurity-SNAP-July-2016.pdf>; Wilson, B.D.M. & Conron, K.J. (2020). *National Rates of Food Insecurity among LGBT People: LGBT People and Covid-19*. The Williams Institute, UCLA, Los Angeles, CA; U.S. Census Bureau. (2021, August). *LGBT Community Harder Hit by Economic Impact of Pandemic*. <https://www.census.gov/library/stories/2021/08/lgbt-community-harder-hit-by-economic-impact-of-pandemic.html>

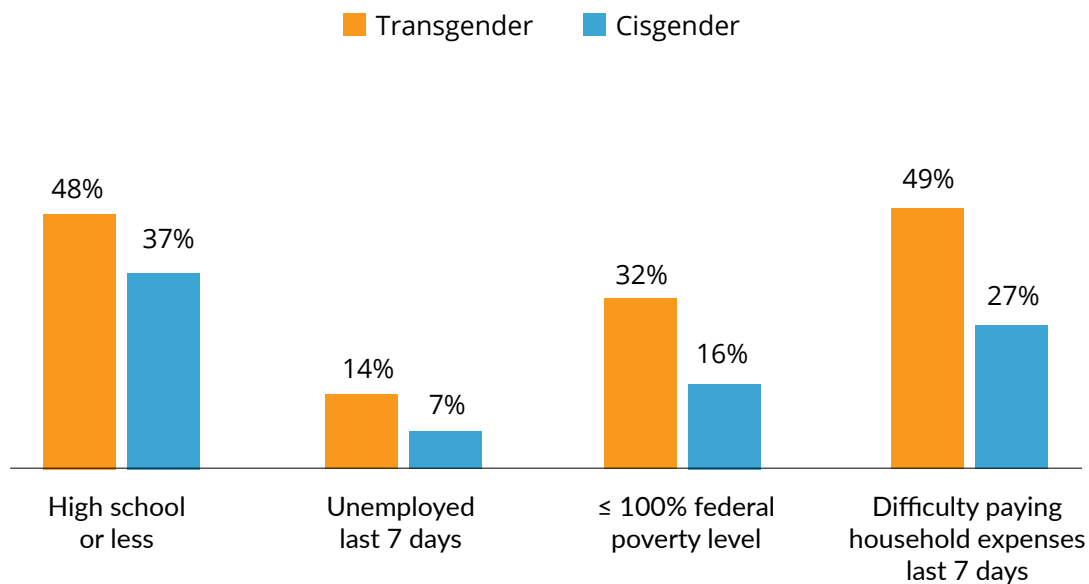
³ USDA Economic Research Service. (2021). *Food Security in the U.S.: Measurement: What is Food Insufficiency?* <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/#insufficiency> Accessed November 2021.

RESULTS

Current Socioeconomic Status

Across several indicators of socioeconomic status, larger proportions of transgender adults were disadvantaged as compared to their cisgender counterparts. Nearly half (48.0%) of transgender adults had a high school education or less, 13.9% were in the workforce, but not working for pay in the last 7 days, nearly a third (32.1%) were living at or below the federal poverty level (FPL), and nearly half (48.7%) reported difficulty paying for usual household expenses, including but not limited to “food, rent or mortgage, car payments, medical expenses, student loans, and so on” in the last 7 days.

Figure 1. Socioeconomic characteristics of transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021 (N=338,125*)

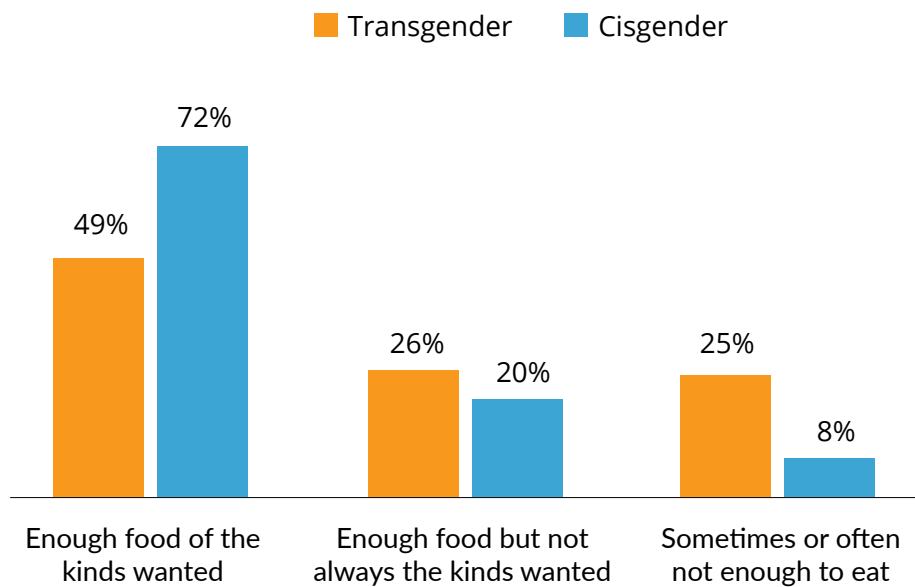


*The sample size (n=296,037) for poverty is smaller than the total analytic sample due to missing data on household income.

Food Insufficiency

- Food insufficiency was three times as common among transgender as cisgender people; 25.3% of transgender adults in the U.S. reported sometimes or often not having enough to eat in the past week, compared to 8.3% of cisgender adults.

Figure 2. Food insufficiency in the last seven days among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021 (N=338,125)

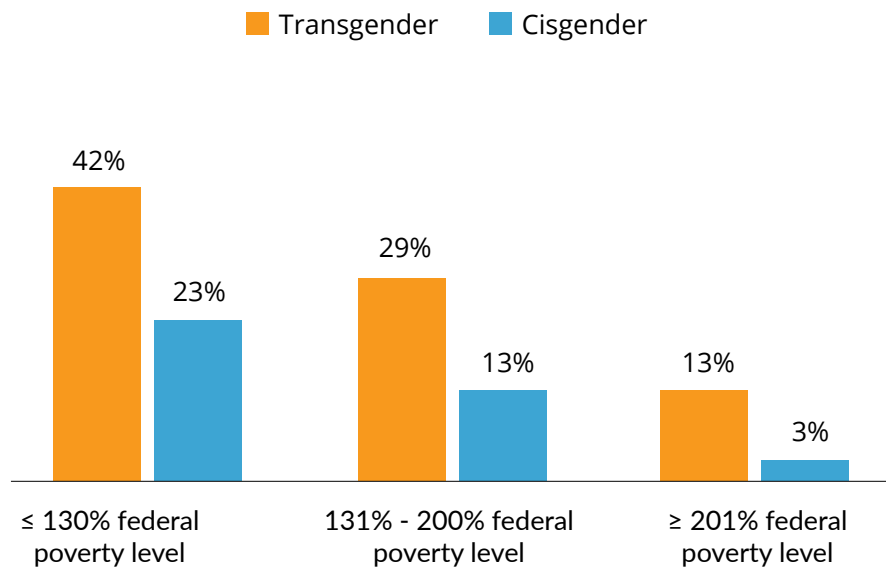


- More than two in five (41.6%) transgender adults who earned less than 130% of the federal poverty level (FPL)⁴—the amount set by the federal government to qualify for the Supplemental Nutrition Assistance Program (SNAP) public assistance program—experienced food insufficiency in the past week.
- Food insufficiency was reported by nearly a third (29.2%) of transgender adults living at 131% – 200% of the FPL and by more than one in ten (12.5%) transgender adults who were living above 200% of the FPL.⁵
- Over one-fifth (22.5%) of cisgender adults who earned less than 130% of the FPL experienced food insufficiency in the past week. Food insufficiency was reported by more than one in ten (12.7%) cisgender adults living at 131% – 200% of the FPL and by few (2.9%) cisgender adults were living above 200% of FPL.
- At all economic levels, food insufficiency was more common among transgender than cisgender adults.

⁴ \$22,656 for a two-person household. See <https://www.fns.usda.gov/snap/recipient/eligibility>

⁵ \$35,840 for a two-person household. See <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines#thresholds>

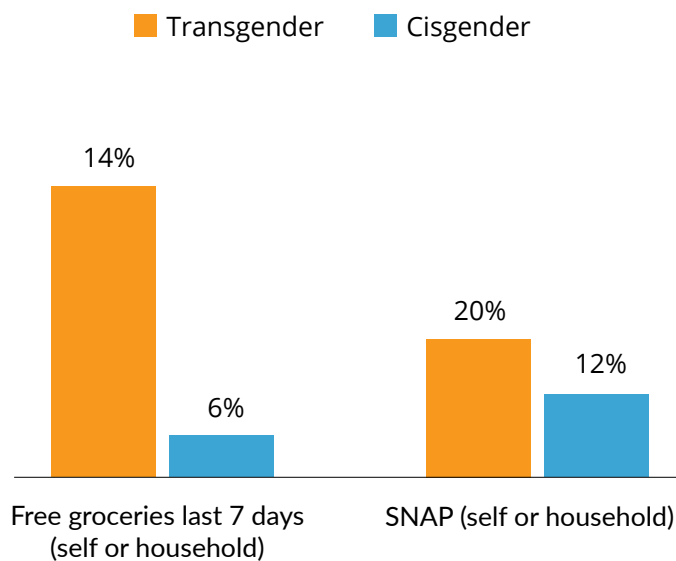
Figure 3. Food insufficiency among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021, by federal poverty level (FPL) (n=296,037)



Food Resource Utilization

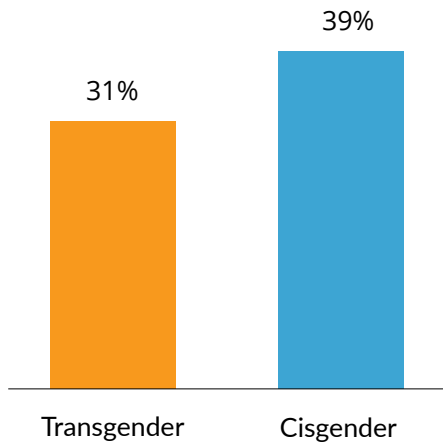
Transgender adults were more likely to report recent use of food resources, including charitable resources such as free groceries from food banks (13.9%) or the Supplemental Nutrition Assistance Program (SNAP) (19.8%), as compared to their cisgender counterparts (5.9% and 12.0%, respectively).

Figure 4. Use of food resources among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021 (N=338,125)



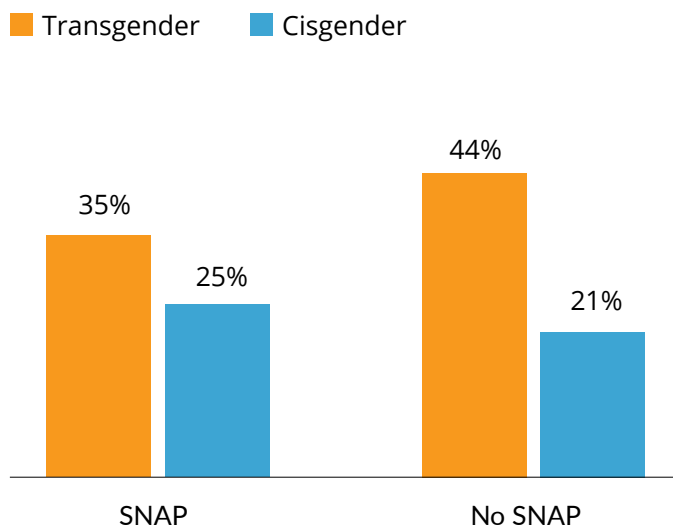
- Slightly less than a third (30.7%) of transgender adults and 38.5% of cisgender adults living at less than 130% of the FPL—the amount set by the federal government to qualify for SNAP—reported that they or someone in their household are receiving SNAP.

Figure 5. Household receipt of SNAP benefits among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021, with income at or below 130% of the federal poverty level (n=37,168)



- Among transgender people, food insufficiency was less prevalent among those with SNAP as compared to those without SNAP benefits (34.6% vs. 44.0%, respectively). Among cisgender respondents, food insufficiency was slightly more common among SNAP recipients than those not receiving SNAP benefits (24.8% vs. 21.2%, respectively).

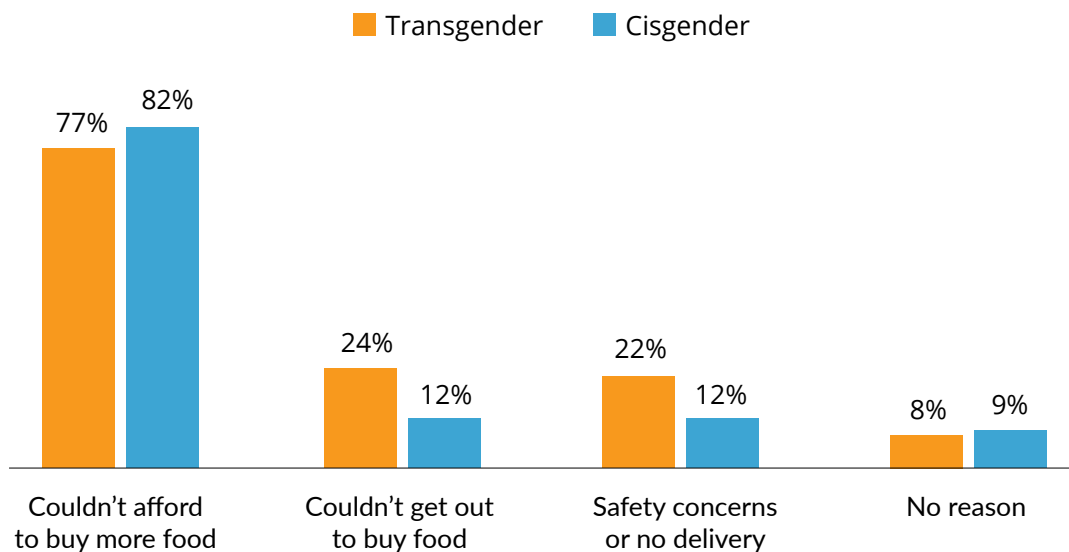
Figure 6. Food insufficiency among transgender and cisgender participants living at or below 130% of the federal poverty level by SNAP status in the Household Pulse Survey, July 21 to October 11, 2021 (n=37,168)



Causes of Food Insufficiency

- Majorities of transgender (76.7%) and cisgender (82.3%) adults reported that their inability to afford more food was the cause of insufficient food in their households.
- Almost twice as many transgender people as cisgender people reported other barriers to accessing food, including that they could not get out to buy food (24.1% and 12.3%, respectively) and safety concerns (22.0% and 11.8%, respectively).

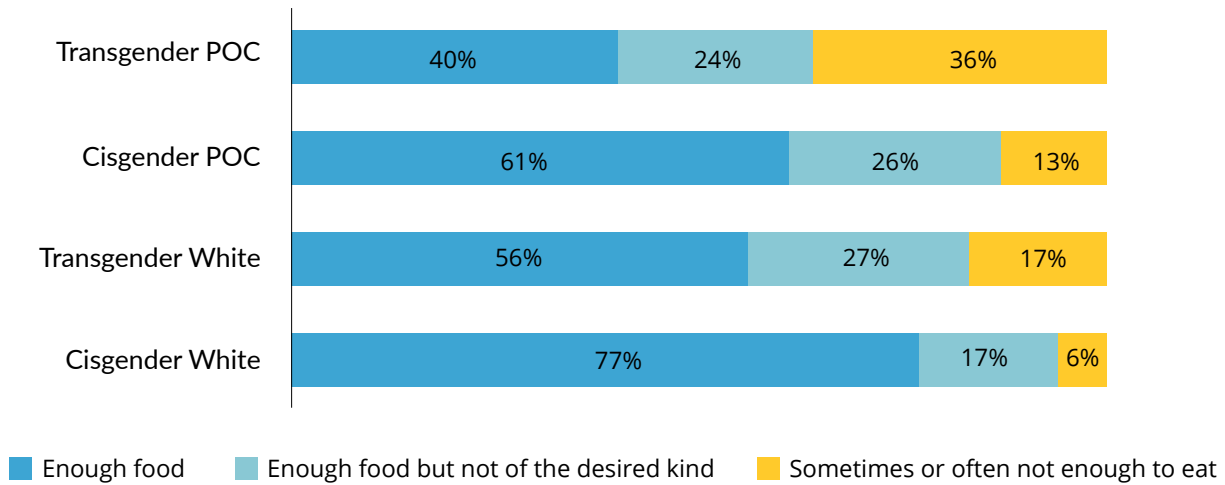
Figure 7. Reasons for insufficient food among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021 (N=338,125)



Differential Vulnerability to Food Insufficiency

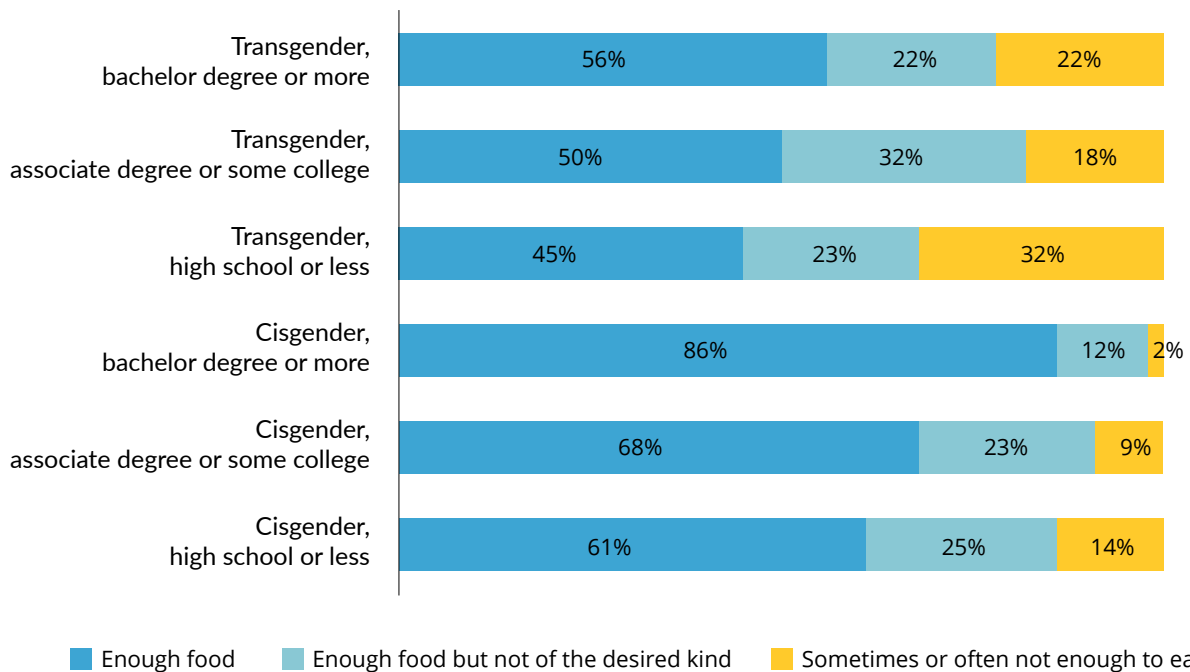
- Food insufficiency varied by gender and race; more than a third of transgender people of color (35.8%) sometimes or often did not have enough to eat in the prior week as compared with 12.6% of cisgender people of color, 17.1% of transgender White people and 6.0% of cisgender White people.
- Nearly six times as many transgender people of color as cisgender White people experienced food insufficiency at some point during the summer or early fall of 2021.

Figure 8. Food insufficiency among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021, by race (N=338,125)



- Food insufficiency also varied by gender and educational attainment; nearly a third of transgender people with a high school degree or less (31.5%), 17.7% of those with an associate degree or some college, and 22.1% of transgender adults with a bachelor's degree or more experienced food insufficiency in the week prior to completing the Household Pulse Survey. More transgender adults with a bachelor's degree experienced food insufficiency in the past week than cisgender adults with a high school degree or less (22.1% vs 13.5%, respectively).

Figure 9. Food insufficiency among transgender and cisgender participants in the Household Pulse Survey, July 21 to October 11, 2021, by education level (N=338,125)



DISCUSSION

Food insufficiency was nearly three times as common among transgender as cisgender people; 25.3% of transgender adults reported sometimes or often not having enough to eat in the past week, compared to 8.3% of cisgender adults. This disproportionality is consistent with higher rates of poverty and unemployment among transgender versus cisgender people observed in this study and as noted in prior research.⁶ Food insufficiency was also far more common among transgender people of color and those with a high school education or less as compared to those who are White, cisgender, and have more formal education—paralleling population patterns of poverty and marginalization.⁷

In this study, SNAP benefit utilization was higher among transgender than cisgender adults; however, only about a third of income-eligible transgender and cisgender people reported that they or a household member currently received SNAP. Among transgender adults, the prevalence of food insufficiency was lower among transgender adults who reported SNAP in the household compared to those who did not (34.6% vs 44.0%), although this difference was not statistically significant, in part, due to the number of transgender people in this comparison. Findings indicate a need for further outreach and enrollment of both transgender and cisgender people in SNAP. Additionally, given fairly high levels of food insufficiency among those with SNAP, examination of benefit levels (currently set at a maximum of \$459 per month for a household of two)⁸ is also warranted.

Barriers to SNAP enrollment were not assessed on the Household Pulse Survey, however, prior research indicates that barriers to obtaining identity documents that align with a person's preferred name and gender marker are obstacles to voting for transgender people, and thus, may also present obstacles to enrollment in public benefits programs.⁹ Few (11%) respondents to the U.S. Transgender Survey, a national community-based sample of over 27,000 transgender adults, reported that their preferred name and gender appeared on all of their identity documents, while more than two-thirds (68%) indicated that they had no identification with their preferred name and gender.¹⁰ Prior negative experiences related to identity documents that do not align with one's gender presentation, including verbal harassment and being denied benefits or service,¹¹ likely inhibit food resource-seeking. Thus, assessing and removing any identity document-related barriers to SNAP enrollment, and communicating enrollment requirements to transgender people through trusted community-based organizations, may be an avenue to reduce food insufficiency among transgender people.

⁶ James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L. A., & Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality, Washington, DC.; Badgett, M.V.L., S.K. Choi, & B.D.M. Wilson. (2019). *LGBT Poverty in the United States: A Study of Differences between Sexual Orientation and Gender identity Groups*. The Williams Institute, UCLA, Los Angeles, CA.

⁷ James, S. E., et al. (2016); Badgett, M.V.L., et al. (2019); Pamuk, E., Makuc, D., Heck, K., Reuben, C., & Lochner, K. (1998). *Socioeconomic Status and Health Chartbook. Health, United States, 1998*. Hyattsville, Maryland: National Center for Health Statistics.

⁸ USDA Food and Nutrition Service. *SNAP Eligibility*. <https://www.fns.usda.gov/snap/recipient/eligibility>. Accessed November 2021.

⁹ O'Neill, K.K. & Herman, J.L. (2020). *The Potential Impact of Voter Identification Laws on Transgender Voters in the 2020 General Election*. The Williams Institute, UCLA, Los Angeles, CA.

¹⁰ James, S. E., et al. (2016)

¹¹ James, S. E., et al. (2016)

This study also found that not being about to get out to buy food and safety concerns were reported by one in five transgender adults (nearly twice as many as cisgender adults). Specific transportation and safety concerns (e.g., physical, psychological, setting) were not assessed on the Household Pulse Survey; however, prior research indicates that disability is more common among transgender versus cisgender people and that harassment on public transportation is also common when a person is perceived to be transgender.¹² Covering delivery charges through SNAP and considering innovative models that include the delivery of medically tailored meals,¹³ such as those offered through state Medicaid programs,¹⁴ or grocery delivery from food banks,¹⁵ may provide additional strategies to reduce food insufficiency for transgender and other vulnerable groups that experience difficulty accessing food supplies.

Relatively few transgender participants on the Household Pulse Survey reported accessing free groceries. Qualitative studies in southern California¹⁶ and the southeastern U.S.¹⁷ indicate that some transgender people feel unwelcome at religiously affiliated food pantries:

...I would try to access the church food banks, it was difficult. Like, you go in there, and they just have this look on their face of like disgust—you really don't wanna deal with them. You don't wanna deal with that. ... You already emotionally defeated going into that situation, and then to get all of that, I was like I'd rather turn around and go back, figure this out a whole 'nother way.

Alex, Los Angeles County, 39, Black/African American, pansexual transgender man¹⁸

Ensuring that non-discrimination protections on the basis of sexual orientation and gender identity are enforced in all aspects of food production to distribution (including through food banks, many of which have been religiously affiliated)¹⁹ to SNAP enrollment is recommended. Finally, funding mechanisms that support hyper-localized solutions and support programs that have experience with

¹² James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L. A., & Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality, Washington, DC.

¹³ Farm Bill Law Enterprise. (2018). *Food Access, Nutrition, and Public Health*. http://www.farmbilllaw.org/wp-content/uploads/2018/03/FBLE_Food-Access-Nutrition-and-Public-Health_Final.pdf

¹⁴ NYC Food Policy Center. (2021, August). *Medically Tailored Meals Become a Covered Service Option in California*. <https://www.nycfoodpolicy.org/food-policy-snapshot-medically-tailored-meals-california-medicaid/>

¹⁵ Feeding America. (2021, July). *Feeding America Launches OrderAhead – A Convenient, Online Grocery Ordering System – To Help Eliminate Barriers to Accessing Food*. <https://www.feedingamerica.org/about-us/press-room/feeding-america-launches-orderahead>

¹⁶ Wilson, B.D.M., Badgett, M. V. L., & Gomez, A. G. H. (2020). *Experiences with Food Insecurity and Food Programs Among LGBTQ People*. The Williams Institute, Los Angeles, CA. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/LGBTQ-Food-Bank-Jun-2020.pdf>

¹⁷ Russomanno, J. & Jabson Tree, J.M. (2020). Food insecurity and food pantry use among transgender and gender non-conforming people in the Southeast United States. *BMC Public Health* 20, 590.

¹⁸ Wilson, B.D.M. et al. (2020)

¹⁹ Briefel, R., Jacobson, J., Clusen, N., Zavitsky, T., Stake, M., Dawson, B., & Cohen, R. (2003). *The Emergency Food Assistance System - Findings from the Client Survey*. USDA Economic Research Service; Food Assistance & Nutrition Research Program in Russomanno, J. & Jabson Tree, J.M.(2020)

and are trusted by transgender people²⁰ should be considered another potential vehicle to reduce food insufficiency among transgender people.

Given pre-COVID-19 levels of poverty among transgender people,²¹ and the disproportionate economic impact burden of this pandemic on LGBT people,²² it is particularly important to monitor and address challenges in access to food for this highly marginalized population. On-going monitoring of food insufficiency among transgender people, through surveys such as Household Pulse, the Current Population Survey Food Security Supplement, and the Behavioral Risk Factor Surveillance Survey is recommended.

²⁰ Viveros, Moses. (2020). *For Us, By Us: A Conversation on Creating Safer, Affirming, and Inclusive Emergency Food Sites and Services for People of Color That Also Identify as a Sexual and Gender Minority*. [Master's thesis]. Falk School of Sustainability and Environment, Chatham University, Pittsburgh.

²¹ Badgett, M.V.L., S.K. Choi, & Wilson, B.D.M. (2019). *LGBT Poverty in the United States: A Study of Differences between Sexual Orientation and Gender identity Groups*. The Williams Institute, UCLA, Los Angeles, CA.

²² Sears, R.B., Conron, K.J., & Flores, A.R. *The Impact of the Fall 2020 COVID-19 Surge on LGBT Adults in the US*. 2021, The Williams Institute, UCLA Los Angeles, CA.

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SUGGESTED CITATION

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APPENDIX

METHODS

This study analyzed cross-sectional data²³ collected between July 21 to October 11, 2021, by the U.S. Census Bureau on the Household Pulse Phase 3.2 Survey²⁴ (weeks 34-39). The Pulse Survey was developed to assess the impact of COVID-19 on employment, food and housing security, and the physical and mental well-being of the U.S. population. Households were enumerated via the Census Bureau's Master Address File; email addresses and cell phone numbers were appended to create a contact sampling frame for the survey. Online surveys were conducted in English and Spanish with 382,908 U.S. adults ages 18 and up. The response rate for weeks 34-39 ranged from 5.4% to 6.5%.²⁵

Questions about sex assigned at birth (What sex were you assigned at birth, on your original birth certificate?) and current gender identity (Do you currently describe yourself as male, female or transgender?) were added to the Pulse Survey starting in week 34 and were used to classify respondents as transgender and cisgender. Respondents who selected transgender as their gender identity were classified as transgender. In the remaining sample that selected male or female gender identity responses and whose sex was not imputed by the Census Bureau (e.g., AGENID_BIRTH=2), those who selected a gender identity (male or female) that differed from their sex assigned at birth (male or female) were classified as transgender. Respondents who selected gender identity options (male or female) that were the same as their sex assigned at birth (male or female) were classified as cisgender. Those who selected "none of these" as their response to the gender identity question were excluded from classification.

Imputed sex was not used to classify transgender and cisgender respondents given concerns about the validity of the imputed sex data. Descriptive analyses conducted by Dr. Bill Jesdale indicate that the demographic characteristics of those classified as transgender based on imputed sex look more similar to those of cisgender respondents than to those of transgender respondents who answered the sex assigned at birth question.²⁶ Finally, the Census Bureau notes that the Pulse Survey was designed to rapidly produce experimental estimates and not to provide prevalence estimates of the LGBT population.²⁷

²³ United States Census Bureau. (2021). *Household Pulse Survey Public Use File (PUF)*. <https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html>

²⁴ United States Census Bureau. (2021) *Household Pulse Survey Technical Documentation*. <https://www.census.gov/programs-surveys/household-pulse-survey/technical-documentation.html#phase3.2>

²⁵ United States Census Bureau. (2021). *Source of the Data and Accuracy of the Estimates for the Household Pulse Survey – Phase 3.2*. https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase3-2_Source_and_Accuracy_Week39.pdf

²⁶ Jesdale, B.M. (2021). *Counting Gender Minority Populations in the Household Pulse Survey (The AGENID=2 Memo)*. National LGBT Cancer Network. <https://cancer-network.org/wp-content/uploads/2021/10/Counting-GM-People-in-Pulse-Data.pdf>

²⁷ Anderson, L., File, T., Marshall, J., McElrath, K., Scherer, Z. (2021, November). *New Household Pulse Survey Data Reveals Differences between LGBT and Non-LGBT Respondents During COVID-19 Pandemic*. United States Census Bureau. <https://www.census.gov/library/stories/2021/11/census-bureau-survey-explores-sexual-orientation-and-gender-identity.html>

Food insufficiency was assessed with a single question, “In the last 7 days, which of these statements best describes the food eaten in your household?” Using criteria articulated by the USDA,²⁸ participants who indicated that they sometimes or often did not have enough to eat were considered food insufficient. Although not a focus of this report, the USDA considers those who had enough, but not always the kinds of food that they wanted to eat marginally food insufficient and those who reported that they had had enough of the kinds of food that they wanted to eat food sufficient.

Participant-reported annual household income range and size were used to create an ordinal measure of percentage of poverty. Annual household income was recoded to the midpoint for each income range or to the lower limit of the highest income category (\$200,000 or more). Recoded income was divided by household size-specific poverty thresholds²⁹ to obtain percentage poverty (i.e., the “ratio of income to poverty” according to U.S. Census criteria).³⁰ Respondents were then placed into one of three economic status groups: <130% (SNAP-eligible),³¹ 131%–200%, and > 201% of the federal poverty level.

The analytic sample was limited to 338,125 survey respondents who could be classified as transgender or cisgender based on the criteria described above and who answered the Pulse question about food insufficiency. Descriptive analyses were conducted using Stata v15.1 statistical software. Analyses included design-based F-tests (Rao-Scott chi-square tests) of differences in proportions to assess whether outcomes vary between groups at an alpha of 0.05.³² Confidence intervals (95% CI) were included to communicate the degree of uncertainty around an estimate due to sampling error. All analyses were weighted to represent adults ages 18 and up living in U.S. households using person-level weights provided by the Census Bureau.

²⁸ USDA Economic Research Service. (2021). *Food Security in the U.S.: Measurement: What is Food Insufficiency?* <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/#insufficiency> Accessed November 2021.

²⁹ U S Census Bureau. *Poverty Thresholds by Size of Family and Number of Related Children Under 18 Years*. Available at: <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html> Accessed November 2021.

³⁰ US Census Bureau. *How the Census Bureau Measures Poverty*. Available at: <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>. Accessed November 2021.

³¹ USDA Food and Nutrition Service. *SNAP Eligibility*. <https://www.fns.usda.gov/snap/recipient/eligibility> . Accessed November 2021.

³² J. N. K. Rao, A. J. Scott, On chi-squared tests for multiway contingency tables with cell proportions estimated from survey data. *Ann. Stat.* 12, 46–60 (1984).

TABLES

Table 1. Sociodemographic characteristics of transgender and cisgender participants (N=338,125) in the Census Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39)

	TRANSGENDER		CISGENDER		
	N=1,334		N=336,791		F#
	%	95% CI	%	95% CI	P-VALUE
Age					
18-24	36.0	30.7,41.7	7.4	7.2, 7.7	0.00
25-39	34.8	30.2, 39.7	25.8	25.5, 26.1	
40-54	10.4	8.0, 13.5	25.6	25.3, 25.9	
55-64	6.5	3.4, 11.9	17.9	17.7, 18.2	
65+	12.3	8.9, 16.8	23.2	22.9, 23.5	
Sex assigned at birth					
Male	50.5	45.0, 56.0	48.2	47.8, 48.5	0.40
Female	49.5	44.0, 55.0	51.8	51.5, 52.2	
Gender identity					
Male	12.5	9.5, 16.4	48.2	47.8, 48.5	--
Female	12.1	9.1, 15.8	51.8	51.5, 52.2	
Transgender	75.4	70.6, 79.6	--	--	
Race-ethnicity					
White, non-Hispanic	56.2	50.5, 61.8	64.5	64.2, 64.9	0.00
Black, non-Hispanic	6.3	4.2, 9.3	10.8	10.5, 11.0	
Asian, non-Hispanic	2.1	1.1, 4.2	5.3	5.2, 5.5	
Any other race alone, or more than one race	7.0	5.0, 9.7	3.5	3.4, 3.6	
Latino/a or Hispanic	28.4	23.0, 34.4	15.9	15.5, 16.2	
Sexual orientation					
Gay or lesbian	26.3	21.4, 31.9	3.1	3.0, 3.2	0.00
Straight, that is not gay or lesbian	6.3	4.5, 8.6	90.0	89.7, 90.2	
Bisexual	32.9	27.7, 38.5	4.1	3.9, 4.2	
Something else	27.0	22.9, 31.6	1.3	1.2, 1.4	
Don't know	7.5	5.4, 10.5	1.5	1.4, 1.64	
Education					
High school or less	48.0	42.4, 53.6	36.6	36.2, 37.0	0.00
Associates or some college	29.8	25.5, 34.4	30.5	30.2, 30.8	
Bachelors or more	22.3	19.2, 25.8	32.9	32.7, 33.2	
Employment past 7 days (work for pay or profit) Among those in the workforce. n=209,150					
Employed	86.1	81.1, 89.9	93.4	93.1, 93.6	0.00
Unemployed	13.9	10.1, 18.9	6.6	6.4, 6.9	
Mean Household size	4.7	4.3, 5.1	3.3	3.3, 3.3	0.00

	TRANSGENDER		CISGENDER		
	N=1,334		N=336,791		F#
	%	95% CI	%	95% CI	P-VALUE
Poverty*					
Not in poverty (>100% federal poverty level)	67.9	62.7, 72.6	83.8	83.4, 84.1	0.00
In poverty (<100% federal poverty level)	32.1	27.4, 37.3	16.2	15.9, 16.6	
Difficulty with expenses past week					
Not at all or a little difficult	51.3	45.8, 56.7	73.0	72.7, 73.3	0.00
Very or somewhat difficult	48.7	43.3, 54.2	27.0	26.7, 27.3	
Kids in household					
No	65.7	60.3, 70.6	63.4	63.1, 63.8	0.40
Yes	34.3	29.4, 39.7	36.6	36.2, 36.9	
Region					
Northeast	16.6	12.5, 21.8	16.9	16.7, 17.2	0.28
South	34.0	28.9, 39.5	38.2	37.8, 38.5	
Midwest	24.8	20.5, 29.7	20.7	20.5, 21.0	
West	24.5	20.4, 29.2	24.2	23.8, 24.5	

CI: Confidence Interval. Bold p-values are statistically significant. # F test for test of difference in proportions.

*The sample size (n=296,037) for poverty is smaller than the total analytic sample due to missing data on household income.

Table 2. Food insufficiency, food resource utilization, and reasons for food insufficiency among transgender and cisgender participants (N=338,125) in the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39)

	TRANSGENDER		CISGENDER		
	N=1,334		N=336,791		F#
	%	95% CI	%	95% CI	P-VALUE
Food insufficiency in the last 7 days					
Enough food of the kinds wanted	49.0	43.5, 54.5	71.5	71.1, 71.8	0.00
Enough food but not always kinds wanted	25.7	21.6, 30.3	20.2	19.9, 20.5	
Sometimes or often not enough to eat	25.3	20.9, 30.3	8.3	8.1, 8.6	
Free groceries or a free meal last 7 days (self or household member) n=335,587					
Yes	13.9	8.7, 19.6	5.9	5.7, 6.2	0.00
No	86.1	80.4, 90.3	94.1	93.8, 94.3	
SNAP (self or household member) n=332,840					
Yes	19.8	14.9, 25.8	12.0	11.7, 12.3	0.00
No	80.2	74.2, 85.1	88.0	87.7, 88.3	
Why did you not have enough to eat?					
Couldn't afford to buy more food	76.7	67.2, 84.1	82.3	81.0, 83.5	0.16
Couldn't get out to buy food	24.1	16.5, 33.8	12.3	11.3, 13.3	0.00
Safety concerns or no delivery	22.0	14.4, 32.1	11.8	10.8, 13.0	0.01
No reason	7.7	4.4, 13.1	8.8	8.0, 9.7	0.63

CI: Confidence Interval. Bold p-values are statistically significant. # F test for test of difference in proportions.

Table 3. SNAP benefits and food insufficiency among transgender participants (n=1,154) in the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39) by poverty level

	≤ 130% FPL*		131% - 200% FPL		≥ 201% FPL		
	N=362		N=108		N=684		F#
	%	95% CI	%	95% CI	%	95% CI	P-VALUE
SNAP benefits	30.7	22.8, 39.8	12.0	6.2, 21.9	8.8	4.5, 16.6	0.00
Food insufficiency in the last 7 days							
Enough food of the kinds wanted	30.8	23.0, 39.9	21.1	12.4, 34.0	65.3	57.9, 72.1	0.00
Enough food but not always kinds wanted	27.5	20.4, 36.1	49.6	31.8, 67.5	22.1	17.1, 28.1	
Sometimes or often not enough to eat	41.6	32.9, 50.9	29.2	15.3, 48.5	12.5	7.6, 20.0	

CI: Confidence Interval. FPL: Federal Poverty Level.

* <130% FPL is the threshold for basic SNAP benefit eligibility set by the USDA

Bold p-values are statistically significant.

F test for test of difference in proportions.

Table 4. SNAP benefits and food insufficiency in the last 7 days among cisgender participants (n=294,883) in the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39) by poverty level

	≤ 130% FPL*		131% - 200% FPL		≥ 201% FPL		
	N=37,096		N=20,962		N=236,825		F#
	%	95% CI	%	95% CI	%	95% CI	P-VALUE
SNAP benefits	38.5	37.5, 39.6	16.1	15.1, 17.1	3.4	3.2, 3.6	0.00
Food insufficiency in the last 7 days							
Enough food of the kinds wanted	43.7	42.6, 44.8	54.2	52.8, 55.5	83.5	83.2, 83.8	0.00
Enough food but not always kinds wanted	33.8	32.8, 34.9	33.1	31.9, 34.4	13.6	13.3, 13.9	
Sometimes or often not enough to eat	22.5	21.6, 23.4	12.7	11.8, 13.7	2.9	2.8, 3.1	

CI: Confidence Interval. FPL: Federal Poverty Level.

* <130% FPL is the threshold for basic SNAP benefit eligibility set by the USDA

Bold p-values are statistically significant.

F test for test of difference in proportions.

Table 5. Food insufficiency in the last 7 days among transgender participants living at or below 130% of the federal poverty level (n=359) by SNAP status in the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39)

	SNAP		NO SNAP		
	N=117		N=242		F#
	%	95% CI	%	95% CI	P-VALUE
Enough food of the kinds wanted	24.2	13.6, 39.4	34.0	24.2, 45.4	0.09
Enough food but not always kinds wanted	41.2	25.9, 58.4	22.0	15.0, 30.9	
Sometimes or often not enough to eat	34.6	20.7, 51.8	44.0	33.5, 55.2	

CI: Confidence Interval. FPL: Federal Poverty Level.

<130% FPL is the threshold for basic SNAP benefit eligibility set by the USDA

Bold p-values are statistically significant.

F test for test of difference in proportions.

Table 6. Food insufficiency among cisgender participants living at or below 130% of the federal poverty level (n=36,809) by SNAP status in the Household Pulse Survey, July 21 to October 11, 2021

	SNAP		NO SNAP		
	N=13,139		N=23,670		F#
	%	95% CI	%	95% CI	P-VALUE
Enough food of the kinds wanted	40.2	38.4, 41.9	45.7	44.3, 47.0	0.00
Enough food but not always kinds wanted	35.1	33.4, 36.8	33.2	31.9, 34.4	
Sometimes or often not enough to eat	24.8	23.2, 26.4	21.2	20.1, 22.3	

CI: Confidence Interval. FPL: Federal Poverty Level.

<130% FPL is the threshold for basic SNAP benefit eligibility set by the USDA

Bold p-values are statistically significant.

F test for test of difference in proportions.

Table 7. Food insufficiency among transgender participants (n=1,334) in the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39) by select demographic characteristics

	ENOUGH FOOD		ENOUGH FOOD BUT NOT OF THE DESIRED KIND		SOMETIMES OR OFTEN NOT ENOUGH TO EAT		
	N= 715		N=362		N=257		F#
	%	95% CI	%	95% CI	%	95% CI	P-VALUE
Age							
18-24	36.9	28.8, 45.8	41.5	32.5, 51.3	28.8	20.1, 39.4	0.16
25-39	32.3	25.9, 39.1	32.3	25.9, 39.1	33.6	24.4, 44.4	
40-54	10.8	7.3, 15.7	10.8	7.3, 15.7	11.3	6.6, 18.6	
55-64	7.9	2.9, 19.6	7.9	2.9, 19.6	8.6	4.3, 16.5	
65+	12.3	7.4, 19.8	12.3	7.4, 19.8	17.7	11.1, 27.0	

	ENOUGH FOOD		ENOUGH FOOD BUT NOT OF THE DESIRED KIND		SOMETIMES OR OFTEN NOT ENOUGH TO EAT		
	N= 715		N=362		N=257		F#
	%	95% CI	%	95% CI	%	95% CI	P-VALUE
Sex assigned at birth							
Male	54.2	45.9, 62.2	42.5	33.8, 51.8	51.6	41.1, 61.9	0.19
Female	45.8	37.8, 54.1	57.5	48.2, 66.2	48.4	38.1, 58.9	
Gender identity							
Male	11.9	8.5, 16.5	13.5	7.0, 24.7	12.7	7.2, 21.6	0.70
Female	10.7	7.2, 15.7	10.6	6.3, 17.2	16.2	9.4, 26.4	
Transgender	77.4	71.1, 82.6	75.9	65.6, 83.8	71.1	60.3, 79.9	
Race-ethnicity							
White, non Hispanic	64.2	55.0, 72.5	58.9	48.9, 68.2	38.1	28.9, 48.1	0.00
Black, non-Hispanic	5.0	2.7, 9.1	7.8	3.7, 15.6	7.1	3.3, 14.6	
Asian, non-Hispanic	2.3	.8, 6.7	1.5	.3, 7.2	2.4	1.1, 5.5	
Any other race alone, or more than one race	3.8	2.4, 6.0	6.1	3.6, 10.1	14.1	8.1, 23.6	
Latino/a or Hispanic	24.6	16.8, 34.6	25.7	17.0, 37.0	38.2	28.1, 49.4	
Education							
High school or less	44.3	35.4, 53.5	43.5	34.1, 53.4	59.7	49.4, 69.2	0.04
Associates or some college	30.4	24.1, 37.5	37.3	29.5, 45.9	20.8	11.3, 31.1	
Bachelors or more	25.4	20.4, 31.0	19.2	14.3, 25.1	19.5	13.9, 26.7	
Employment past 7 days (work for pay or profit) Among those in the workforce; n=922							
Employed	91.0	82.8, 95.5	89.3	80.6, 94.3	73.1	60.7, 82.6	0.00
Unemployed	90	4.5, 17.2	10.7	5.7, 19.4	26.9	17.4, 39.3	
Poverty*							
Not in poverty (>100% federal poverty level)	80.8	74.5, 85.9	65.5	55.4, 74.4	45.0	33.2, 57.5	0.00
In poverty (< 100% federal poverty level)	19.2	14.1, 25.5	34.5	25.6, 44.6	55.0	42.5, 66.8	
Kids in household							
No	69.5	61.3, 76.6	73.6	64.6, 80.9	50.3	39.9, 60.7	0.00
Yes	30.5	23.4, 38.7	26.4	19.1, 35.4	49.7	39.3, 60.1	
Region							
Northeast	17.6	10.9, 27.1	12.2	7.9, 18.6	19.2	12.5, 28.3	0.77
South	33.5	26.4, 41.4	32.1	23.0, 42.9	36.9	26.8, 48.4	
Midwest	25.1	18.7, 33.0	27.6	20.5, 36.1	21.3	14.0, 31.0	
West	23.8	17.3, 31.8	28.0	21.6, 35.4	22.6	16.2, 30.6	

CI: Confidence Interval. Bold p-values are statistically significant.

F test for test of difference in proportions.

*The sample size (n=1,154) for poverty is smaller than the total analytic sample due to missing data on household income.

Table 8. Food insufficiency by race, education, and gender among participants (N=338,125) to the Household Pulse Survey, July 21 to October 11, 2021 (Weeks 34-39)

	ENOUGH FOOD		ENOUGH FOOD BUT NOT OF THE DESIRED KIND		SOMETIMES OR OFTEN NOT ENOUGH TO EAT		
	N= 267,542		N=53,264		N=17,319		F#
	%	95% CI	%	95% CI	%	95% CI	P-VALUE
Race and gender							
White cisgender	77.1	76.7, 77.5	16.9	16.6, 17.3	6.0	5.7, 6.2	0.00
White transgender	55.9	49.6, 62.0	26.9	22.3, 32.2	17.1	13.0, 22.3	
People of color cisgender	61.2	60.5, 61.9	26.2	25.5, 26.8	12.6	12.1, 13.2	
People of color transgender	40.0	30.9, 49.9	24.2	17.3, 32.6	35.8	27.6, 44.9	
Education and gender							
Cisgender, high school or less	61.2	60.5, 62.0	25.2	24.5, 25.9	13.5	12.9, 14.1	0.00
Cisgender, Associate or some college	68.3	67.8, 68.8	23.2	22.7, 23.6	8.5	8.2, 8.9	
Cisgender, Bachelors or more	85.7	85.4, 86.0	11.9	11.6, 12.2	2.2	2.3, 2.5	
Transgender, high school or less	45.2	35.4, 55.4	23.3	16.6, 31.7	31.5	23.8, 40.4	
Transgender, Associate or some college	50.0	42.1, 58.0	32.3	25.7, 39.6	17.7	11.4, 26.5	
Transgender, Bachelors or more	55.7	49.0, 62.3	22.1	17.3, 27.9	22.1	16.7, 28.8	

CI: Confidence Interval. Bold p-values are statistically significant. Row percentages total 100%.

F test for test of difference in proportions