



Published in final edited form as:

Acad Pediatr. 2025 ; 25(4): 102807. doi:10.1016/j.acap.2025.102807.

The Association of Food Hardship With Family Resilience and Connection: Does Participation in Supplemental Nutrition Assistance Program Modify This Association?

Madeline Frank, MPH, MSW,

Anna E. Austin, PhD, MPH

Department of Maternal and Child Health (M Frank), Gillings School of Global Public Health, University of North Carolina at Chapel Hill; School of Social Work (M Frank), University of North Carolina at Chapel Hill; Injury Prevention Research Center (M Frank and AE Austin), University of North Carolina at Chapel Hill; Department of Health Behavior (AE Austin), Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Abstract

OBJECTIVE: The aims of this nationally representative cross-sectional study were to examine 1) the association of food hardship with family resilience and connection among families with children ages 6 to 17 years and 2) whether participation in Supplemental Nutrition Assistance Program (SNAP) benefits modified this association.

METHODS: We used 2019–21 data from the National Survey of Children’s Health. We conducted multivariable generalized linear regression to calculate risk ratios (RRs) and 95% confidence intervals (CIs) examining the association of food hardship with an established measure of family resilience and connection. Then, among households with incomes < 200% of the federal poverty level (FPL), we examined whether the association of food hardship with family resilience and connection differed among households participating and not participating in SNAP. We adjusted analyses for household characteristics and participation in other social safety net programs.

RESULTS: Families who experienced food hardship were less likely (RR = 0.73, 95% CI 0.69, 0.76) to have high family resilience and connection compared to families who did not experience food hardship. SNAP participation did not modify this association among households with incomes < 200% FPL (RR = 0.71, 95% CI 0.65, 0.78 for SNAP-participating households; RR = 0.71, 95% CI 0.65, 0.77 for nonparticipating households).

CONCLUSIONS: Results add to evidence demonstrating that food hardship is a risk factor for lower family resilience and connection. Results highlight the need for further programs and policies, in addition to SNAP, to support families experiencing food hardship and promote family resilience and connection.

Address correspondence to Madeline Frank, MPH, MSW, Department of Maternal and Child Health, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, 135 Dauer Dr, Chapel Hill, NC 27599 (msf896@gmail.com).

DECLARATION OF COMPETING INTEREST

The authors have no conflicts of interest to disclose.

Keywords

family; family connection; food hardship; resilience; Supplemental Nutrition Assistance Program

Food insecurity, defined as limited or uncertain access to adequate food for a healthy, active life, is a pressing public health concern.¹ In 2022, food insecurity affected 17.3%, or 6.4 million, households with children in the United States, a substantial increase from 12.5% of households with children in 2021.¹ While food insecurity is a form of material hardship, or economic strain related to difficulty meeting basic needs, it is a unique stressor that is distinct from the experience of poverty.²

Existing research demonstrates the potential adverse impacts of food insecurity on short- and long-term outcomes for children and their caregivers. For example, studies show an association between household food insecurity and heightened risk for involvement with child protective services for suspected child abuse or neglect,³ an increased likelihood of perpetrating peer violence and bullying,⁴ and lower academic skills and poor mental health among children and youth.^{5,6} Longitudinal data suggest that household food insecurity is associated with increased use of harsh discipline strategies and heightened conflict within the family unit.⁷ Importantly, inconsistent access to adequate nourishment can negatively impact the brain's biology, including increasing stress and decreasing a caregiver's ability to engage in positive parenting practices.⁷ This can occur regardless of a family's socioeconomic status.

Family resilience is an important component of fostering positive outcomes and resilience among children and youth, regardless of a child's exposure to adversity. Harvard's Center for the Developing Child defines resilience as "a positive, adaptive response in the face of significant adversity," and highlights that resilience in youth and families can mitigate impacts of hardships and contribute to positive outcomes across the life course.⁸ Resilience research in the family system suggests that the ability of a child's family unit to positively adapt to challenges is important for promoting a child's individual resilience.⁹ Specifically, the Centers for Disease Control and Prevention highlights the importance of safe, stable, and nurturing relationships between children and caregivers for fostering healthy child development.¹⁰ Other studies show an association of nurturing parenting and parental coping with child resilience.¹¹ The National Child Traumatic Stress Network notes the intricate connection between the resilience of an individual within a family and the family unit as a whole.¹² Thus, for the purposes of this study, we conceptualized family resilience and connection as specific to interpersonal functioning within families.

Lack of access to adequate food has the potential to impact family functioning and resilience, and specifically interpersonal functioning within families. The Family Adjustment and Adaptation Response (FAAR) model¹³ hypothesizes that families seek to maintain stability and use their personal, family, and community resources, in addition to other coping mechanisms, to deal with stressors.¹³ When this is disturbed, families attempt to restore stability by adapting their coping mechanisms, reducing demands, or altering their perspectives.¹³ Under the FAAR model, lack of access to adequate food can be conceptualized as a stressor impacting a family's stability, and the resources and coping

mechanisms (or lack thereof) that caregivers use to attempt to restore stability could impact overall family resilience and connection.

Food insecurity is a modifiable risk factor that can be addressed through local, state, and federal programs and policies. The Supplemental Nutrition Assistance Program (SNAP) is the largest program in the US addressing food insecurity. In 2022, SNAP provided a monthly benefit to assist with the cost of food to more than 41 million individuals.¹⁴ SNAP participation is associated with a range of positive child and family outcomes, including a reduced risk of household and child food insecurity, poor health and development among young children, and psychological distress among adults, and improved grade retention among school-aged children.^{15–17} Under the FAAR model, families experiencing the stressor of food insecurity but who participate in SNAP may be more supported in using constructive coping mechanisms than families who do not participate in SNAP, which could contribute to greater family resilience and connection.

While studies have examined factors associated with family resilience^{11,18} and SNAP as a protective factor for health outcomes more broadly,¹⁶ no studies have examined the association between food hardship and family resilience and connection and whether this association differs for families who do and do not participate in SNAP. This study aimed to 1) examine the association between food hardship and family resilience and connection, and 2) among families likely eligible for SNAP (ie, households with incomes < 200% of the federal poverty level [FPL]), examine whether SNAP participation modified the association between food hardship and family resilience and connection.

METHODS

DATA SOURCES

In this cross-sectional study, we used 2019–21 data from the National Survey of Children's Health (NSCH).¹⁹ The NSCH is funded and directed by the Maternal and Child Health Bureau. It is a nationally representative survey conducted annually in all 50 states and the District of Columbia on a systematic random sample of households with children ages 0 to 17 years. Survey respondents are the child's parent or guardian (hereafter referred to as "caregiver"), and caregivers complete the survey online, on paper, or over the phone. Due to the nature of some of the questions included in our measure of family resilience and connection, we included only families with children ages 6 to 17 years in analyses. This study was reviewed and considered exempt by the University of North Carolina's Institutional Review Board.

MEASURES

Our exposure was household food hardship during the past 12 months, defined as struggling to afford sufficient quality and/or quantity of food. In the NSCH, household food hardship is measured with a single question, "Which of these statements best describes your household's ability to afford the food you needed during the past 12 months?" with response options including, "We could always afford to eat good nutritious meals," "We could always afford enough to eat but not always the kinds of food we should eat," "Sometimes we

could not afford enough to eat,” and “Often we could not afford to eat.” The United States Department of Agriculture (USDA) defines food insecurity as limited or uncertain availability of or ability to access nutritionally adequate and safe food and is typically measured by an 18- or 6-item questionnaire to assess experiences in the past 12 months or past 30 days.²⁰ Food insecurity captures reductions in diet quality and variety, anxiety about food running out, and changes in food intake. The USDA defines food insufficiency, a related but narrower construct, as a household not having enough to eat, sometimes or often, in the past 7 days.²⁰ In contrast to food insecurity, food insufficiency focuses solely on whether a household has enough food to eat and is intended to assess rapid changes in food availability.²¹ The question and response options included on the NSCH reflect aspects of both food insufficiency (not having enough food to eat) and food insecurity (not being able to afford sufficient quality and quantity of food and a 12-month timeframe). Thus, we considered response options of “We could always afford enough to eat but not always the kinds of food we should eat,” “Sometimes we could not afford enough to eat,” or “Often we could not afford to eat” to capture a broad construct of food hardship, or that a household experienced challenges affording quality food (not being able to afford the kinds of food they should eat) and/or sufficient quantity of food (not being able to afford enough to eat). We also conducted sensitivity analyses with a measure of food insufficiency as the exposure, defined as response options of “Sometimes we could not afford enough to eat,” and “Often we could not afford to eat.”²⁰

Our outcome was family resilience and connection, conceptualized as interpersonal functioning within families and measured by the family resilience and connection index (FRCI). The FRCI is an established measure created using 6 questions available from the NSCH.¹¹ The FRCI questions capture key aspects of family resilience and connection commonly agreed upon in the literature, such as beliefs that facilitate coping, adherence to routines while allowing for deviations when necessary, effective communication skills, and adaptive problem solving, and reflect characteristics that have the potential to support child wellbeing.¹¹ This index has been used in prior studies examining family resilience and connection.¹⁸ The first 4 items in the FRCI index ask, “When your family faces problems how likely are you to do each of the following: 1) talk together about what to do; 2) work together to solve our problems; 3) know we have strengths to draw on; and 4) stay hopeful even in difficult times.” Response options for each of the 4 items include “all of the time,” “most of the time,” “some of the time,” and “none of the time.” Consistent with prior research, we assigned 1 point to responses of “all of the time” for each of the 4 items.¹¹ Two additional items ask, “How well can you and this child share ideas or talk about things that really matter?” and “How well do you think you are handling the day to day demands of raising children?”. Response options include “very well,” “somewhat well,” “not very well,” and “not at all.” Consistent with prior research, we assigned 1 point to responses of “very well” to both items.¹¹ We summed points assigned to each of these 6 items, with totals ranging from 0 to 6 and 6 representing the highest family resilience and connection score. Consistent with prior research, we categorized the FRCI into “high” (4–6 points) as compared to low or moderate (0–3 points) family resilience and connection.¹¹

Our modifier was household SNAP participation in the past 12 months. In the NSCH, SNAP participation is captured with the question, “At any time during the past 12 months, even

for 1 month, did anyone in your family receive Food Stamps or Supplemental Nutrition Assistance Program (SNAP) benefits?”. Response options were “yes” or “no.”

To identify potential confounders, we created a conceptual diagram (Supplemental Figure 1) based on an extensive literature review and author subject matter expertise. We adjusted analyses for potential confounding variables including family income (0%–99%, 100%–199%, 200%–399%, or ≥400% FPL), highest education level achieved of caregiver(s) within the household (high school or less, some college, or college or higher), child race and ethnicity (Hispanic, White non-Hispanic, Black non-Hispanic, or Multiracial/non-Hispanic/Other), household participation in the Special Supplemental Nutrition Program for Women, Infant, and Children during the past 12 months, household participation in SNAP during the past 12 months, household participation in free or reduced lunch in the past 12 months, family size (≤4 or ≥5 family members), immigration history (child of immigrant or US-born parents), and caregiver employment (unemployed or employed). Further description of confounders is available in Supplemental Table 1.

STATISTICAL ANALYSIS

We used multivariable linear regression with a log link and binomial distribution to calculate risk ratios (RRs) and corresponding 95% confidence intervals (CIs). We adjusted all models for the above noted confounders and accounted for the complex sampling design of NSCH. We first calculated RRs comparing the likelihood of high family resilience and connection among households experiencing food hardship to those not experiencing food hardship. Then, among households with incomes < 200% FPL (ie, likely to be eligible for SNAP benefits), we calculated RRs and 95% CIs comparing the likelihood of high family resilience among households experiencing food hardship to those not experiencing food hardship separately for households participating in SNAP and households not participating in SNAP. We conducted analyses in Stata SE 18 (StataCorp LLC).

RESULTS

Characteristics of the study population, overall and stratified by household experiences of food hardship, are available in Table 1. From 2019 to 2021, among families with children ages 6 to 17 years (n = 82,068), 30.5% experienced food hardship in the past year. More than half (51.7%) had high family resilience and connection. Overall, 20.2% of households participated in SNAP. Among households that experienced food hardship, 42.5% had high family resilience and connection. In contrast, among households that did not experience food hardship, 55.7% had high family resilience and connection.

In adjusted analyses, households that experienced food hardship were less likely (RR = 0.73, 95% CI 0.69, 0.76) to have high family resilience and connection compared to households that did not experience food hardship (Table 2). In sensitivity analyses, households that experienced food insufficiency were less likely (RR = 0.77, 95% CI 0.69, 0.86) to have high family resilience and connection compared to households that did not experience food insufficiency (Table 2).

Characteristics of households with incomes < 200% FPL stratified by SNAP participation are available in Supplemental Table 2. Among households with incomes < 200% FPL who participated in SNAP, households that experienced food hardship were less likely (RR = 0.71, 95% CI 0.65, 0.78) to have high family resilience and connection compared to households that did not experience food hardship (Table 3). Among households with incomes < 200% FPL who did not participate in SNAP, households that experienced food hardship were less likely (RR = 0.71, 95% CI 0.65, 0.77) to have high family resilience and connection compared to households that did not experience food hardship.

Discussion

In a nationally representative sample of households with children ages 6 to 17 years, we found that food hardship was associated with a lower likelihood of high family resilience and connection. We did not find substantial evidence that SNAP participation among households likely eligible (ie, incomes < 200% FPL) modified this association. Specifically, among both households that did and did not participate in SNAP, food hardship was associated with a lower likelihood of high family resilience and connection. Our results highlight that while food hardship is a potential factor affecting family resilience and connection, SNAP participation, and possibly specific aspects of SNAP participation such as the amount of benefit received, may not be sufficient to fully offset the stress associated with food hardship for some families. In fact, prior research shows that SNAP-participating households with children report needing an additional \$47 more per week in SNAP benefits to be able to afford enough food.²² Collectively, these results can be used to inform ongoing discussions at the state and federal levels regarding future increases in SNAP benefit amounts.

Our results support a body of literature demonstrating that food hardship can have negative implications for child and family functioning and wellbeing. Prior research shows strong evidence of associations between food hardship and potential determinants of family resilience and connection, including caregiver mental and emotional health, caregiver stress, and relations between caregivers and children.²³ Specifically, multiple studies show that household food hardship is associated with an increased risk of caregiver, child, and adolescent depression, anxiety, and stress.²⁴ In qualitative studies, child caregivers report significant impacts of food hardship on their stress and mental health, with subsequent negative implications for their children's physical, social, and emotional health.²⁵ Prior research also shows that among caregivers of young children, food hardship is associated with increased parent-to-child aggression.²⁶ Research indicates that food hardship is also associated with experiences²⁷ and perpetration of intimate partner violence, including among caregivers.²⁸ Thus, results from our study showing that food hardship is associated with a lower likelihood of high family resilience and connection are consistent with existing evidence.

Family resilience is a complex and multifaceted construct.¹¹ While many studies demonstrate that SNAP participation has positive impacts at the individual- and population-levels, including reductions in food hardship,²⁹ reductions in rates of child protective services-investigated reports,³⁰ and reductions in rates of interpersonal violence,³¹ our

results suggest that SNAP participation alone may not be sufficient to modify the association between food hardship and lower family resilience and connection. There are several possible explanations for these results.

Research shows that families who apply for and participate in SNAP are different than households that are income-eligible but do not participate. SNAP-participating households tend to experience greater food hardship than income-eligible nonparticipating households,³² generally have lower incomes, and tend to face additional forms and greater severity of material hardships.³³ This phenomenon is reflected in our study population as well (Supplemental Table 2). For example, nonparticipating households likely eligible for SNAP (< 200% FPL) were more likely to have a caregiver in the home who was employed, had a higher education level, and received greater income than SNAP-participating households. SNAP-participating households, alternatively, were more likely to report food hardship and identify as belonging to a minoritized racial/ethnic group than nonparticipating households. Importantly, this raises the possibility that experiencing racism, an established risk factor and form of trauma, could be an additional burden disproportionately affecting SNAP-participating households and impacting family resilience and connection.³⁴

Similar to our results, prior research found that participation in free and reduced lunch, another social welfare program focused on alleviating food hardship, did not significantly modify the association between food hardship and poor mental health outcomes among youth.³⁵ In discussing potential reasons for their findings, the authors state that participation in free or reduced lunch may be insufficient to offset the stress of food hardship, in addition to noting the potentially harmful impacts of stigma on participating children.

Given that SNAP-participating families may be experiencing a greater number or severity of stressors than nonparticipating families, additional supports may be needed to modify the association between food hardship and family resilience and connection. For instance, programs that offer cash benefits to families, like the Child Tax Credit, have been shown to decrease parental anxiety and may play a role in enhancing family resilience and connection.³⁶ Integrating evidence-based programs like the Positive Parenting Program (Triple P)³⁷ could be a valuable complement to SNAP. Triple P teaches parents strategies to support children's self-regulation and social competence.³⁷ Partnering with SNAP offices to promote such programs may strengthen coping strategies of families experiencing food and material hardship. Additionally, studies show SNAP benefits alone may not be sufficient to fully address food hardship for all households, and that families experience decreased spending on food and decreased nutritional intake as their benefits run out towards the end of the month.³⁸ Thus, policy changes like increasing the amount of SNAP benefits households receive, as was implemented through emergency allotments during the COVID-19 (Coronavirus 2019) pandemic, could potentially further decrease food hardship and mitigate the association between food hardship and family resilience and connection.³⁹

LIMITATIONS

This study has several limitations. First, the cross-sectional design prevents establishing temporality between food hardship, SNAP participation, and family resilience. Future longitudinal studies are needed. Second, food hardship was measured with a single NSCH

question rather than USDA's validated scales, potentially missing nuances in household experiences of food hardship. Data on SNAP participation specifics, such as the duration of participation and benefit amount received, were unavailable. This may obscure potential differences in the impact of shorter- versus longer-term SNAP participation and higher versus lower SNAP benefits on family resilience and connection. Third, the Family Resilience and Connection Index is a valid and reliable measure,¹¹ but may not fully capture all relevant aspects of family resilience and connection. It is also possible that participants underreported levels of food hardship or overreported family resilience and connection due to social desirability. Further, we dichotomized the FRCI into a binary outcome, grouping low and moderate scores together. This approach was necessary to ensure sufficient statistical power for our multivariable analyses but may potentially limit the granularity of our findings. Future research could maintain 3 FRCI categories to capture a fuller understanding of family resiliency and connection in the context of food hardship and SNAP participation. Fourth, in some states, the cutoff for SNAP eligibility is < 200% FPL. However, we took a conservative approach by using 200% FPL recognizing that household income can fluctuate over time and may not always be reported with complete accuracy. It is possible that we may have overestimated the number of households eligible for SNAP, potentially biasing results towards the null. Fifth, we adjusted analyses for a comprehensive set of potential confounders, however, there is always potential for residual or unmeasured confounding.

Last, the data we used in this study are situated primarily within the COVID-19 pandemic context, during which time many families received increased benefits from social support programs such as SNAP emergency allotments.³⁹ While our study contributes to the understanding of family resilience during this challenging time, future research is needed to explore the relationship between food hardship and family resiliency and connection post-COVID. Further, given that SNAP participation can vary by state, additional studies could examine whether family resilience and connection differ by US region. Qualitative research could also shed light on potential pathways between food hardship and family resilience and connection and strategies to mitigate this association.

CONCLUSIONS

Family resilience and connection is critical to fostering positive outcomes among children and adolescents across the life course and may be impacted by food hardship, a modifiable factor. Programs and policies targeting food hardship, like SNAP, could act as a protective factor. We found that families who experienced food hardship were less likely to have high family resilience and connection compared to families who were food secure. Among families likely eligible for SNAP (< 200% FPL), SNAP did not modify the association between food hardship and family resilience and connection. Bolstering existing and adding new social supports for families experiencing food hardship may strengthen SNAP's potential to enhance family resilience and connection.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Financial statement:

This study was funded by an award from the Centers for Disease Control and Prevention, National Center for Injury Control and Prevention (R01CE003334). The sponsor had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of manuscript; and decision to submit the manuscript for publication.

REFERENCES

1. USDA ERS - Measurement. (n.d.). Retrieved 2024. Available at: <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/measurement/>. Accessed on December 10, 2024.
2. Rodems R, Shaefer HL. Many of the kids are not alright: material hardship among children in the United States. *Child Youth Serv Rev*. 2020;112:104767.
3. Yang M The effect of material hardship on child protective service involvement. *Child Abuse Negl*. 2015;41:113–125. [PubMed: 24908518]
4. Jackson DB, Vaughn MG. Household food insecurity during childhood and adolescent misconduct. *Prev Med*. 2017;96:113–117. [PubMed: 28043828]
5. Orihuela CA, Cox C, Evans R, et al. Associations of household food insecurity with academic outcomes in early adolescents. *J Sch Health*. 2023;93:883–890. [PubMed: 37357352]
6. Ovenell M, Azevedo Da Silva M, Elgar FJ. Shielding children from food insecurity and its association with mental health and well-being in Canadian households. *Can J Public Health*. 2022;113:250–259. [PubMed: 35025102]
7. Johnson AD, Markowitz AJ. Food insecurity and family well-being outcomes among households with young children. *J Pediatr*. 2018;196:275. [PubMed: 29703363]
8. Center on the Developing Child at Harvard University: National Scientific Council on the Developing Child. Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper No. 13. 2015; www.developingchild.harvard.edu.
9. Walsh F. Family resilience: a framework for clinical practice. *Fam Process*. 2003;42:1–18. [PubMed: 12698595]
10. Centers for Disease Control and Prevention. Essentials for Childhood: Creating Safe, Stable, Nurturing Relationships and Environments for All Children. U.S. Department of Health and Human Services; 2014. Available at: <https://www.cdc.gov/child-abuse-neglect/media/pdf/essentials-for-childhood-framework508.pdf> (Accessed October 6, 2024).
11. Bethell CD, Gombojav N, Whitaker RC. Family resilience and connection promote flourishing among US children, even amid adversity. *Health Aff*. 2019;38:729–737.
12. National Child Traumatic Stress Network. Family resilience and traumatic stress: a guide for mental health providers. National Center for Child Traumatic Stress; 2011. Available at: https://www.nctsn.org/sites/default/files/resources/family_resilience_and_traumatic_stress_providers.pdf (Accessed October 6, 2024).
13. Patterson JM. Families experiencing stress: I. The Family Adjustment and Adaptation Response Model:II: Applying the FAAR model to health-related issues for intervention and research. *Fam Syst Med*. 1998;6(2):202–237. 10.1037/h0089379
14. Hall L. Food insecurity increased in 2022, with severe impact on households with children and ongoing racial inequities | Center on Budget and Policy Priorities; 2023. Available at: <https://www.cbpp.org/blog/food-insecurity-increased-in-2022-with-severe-impact-on-households-with-children-and-ongoing>. Accessed on December 10, 2024.
15. Ettinger de Cuba, Stephanie A, Bovell-Ammon AR, et al. SNAP, young children's health, and family food security and healthcare access. *Am J Prev Med*. 2019;57:525. [PubMed: 31542130]
16. Beharie N, Mercado M, McKay M. A Protective Association between SNAP Participation and Educational Outcomes Among Children of Economically Strained Households. *J Hunger Environ Nutr*. 2017;12:181–192. [PubMed: 28725333]
17. Oddo VM, Mabli J. Association of participation in the Supplemental Nutrition Assistance Program and psychological distress. *Am J Public Health*. 2015;105:e30–e35.

18. Song J, Fogarty K, Suk R, Gillen M. Behavioral and mental health problems in adolescents with ADHD: exploring the role of family resilience. *J Affect Disord.* 2021;294:450–458. [PubMed: 34325164]
19. The United States Census Bureau. Associate Director for Demographic Programs, National Survey of Children's Health. 2022 National Survey of Children's Health Frequently Asked Questions. October 2023. Available at: <https://www.census.gov/programs-surveys/nsch/data/datasets.html>. Accessed on December 10, 2024.
20. United States Department of Agriculture. Economic Research Service. Food Security in the U.S.- Measurement. Available at: <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement#insecurity> (Accessed February 11, 2025).
21. Poblacion A, de Cuba SE, Cook JT. Comparing food security before and during the COVID-19 pandemic: considerations when choosing measures. *J Acad Nutr Diet.* 2021;121:1945. [PubMed: 34247979]
22. Gundersen C, Kreider B, Pepper JV. Reconstructing the Supplemental Nutrition Assistance Program to more effectively alleviate food insecurity in the United States. *RSF J Soc Sci.* 2018;4:113–130. 10.7758/RSF.2018.4.2.06
23. Gitterman BA, Chilton LA, Cotton WH, et al. Promoting food security for all children. *Pediatrics.* 2015;136:e1431–e1438. [PubMed: 26498462]
24. Cain KS, Meyer SC, Cummer E, et al. Association of food insecurity with mental health outcomes in parents and children. *Acad Pediatr.* 2022;22:1105–1114. [PubMed: 35577282]
25. Knowles M, Rabinowich J, Ettinger de Cuba S, et al. “Do you wanna breathe or eat?”: parent perspectives on child health consequences of food insecurity, trade-offs, and toxic stress. *Matern Child Health J.* 2016;20:25–32. [PubMed: 26156827]
26. Helton JJ, Jackson DB, Boutwell BB, et al. Household food insecurity and parent-to-child aggression. *Child Maltreatment.* 2019;24:213–221. [PubMed: 31094579]
27. Ricks JL, Cochran SD, Arah OA, et al. Food insecurity and intimate partner violence against women: results from the California Women's Health Survey. *Public Health Nutr.* 2016;19:914–923. [PubMed: 26096652]
28. Schwab-Reese LM, Peek-Asa C, Parker E. Associations of financial stressors and physical intimate partner violence perpetration. *Inj Epidemiol.* 2016;3:6. [PubMed: 27747543]
29. Keith-Jennings B, Llobrera J, Dean S. Links of the Supplemental Nutrition Assistance Program with food insecurity, poverty, and health: evidence and potential. *Am J Public Health.* 2019;109:1636–1640. [PubMed: 31693420]
30. Austin AE, Shanahan ME, Frank M, et al. Association of state expansion of Supplemental Nutrition Assistance Program eligibility with rates of child protective services—investigated reports. *JAMA Pediatr.* 2023;177:294–302. [PubMed: 36689239]
31. Austin AE, Shanahan M, Frank M, et al. State expansion of Supplemental Nutrition Assistance Program eligibility and rates of interpersonal violence. *Prev Med.* 2023;175 107725–107725. [PubMed: 37827207]
32. Nord M, Anne Maria Golla. Does SNAP Decrease Food Insecurity? Untangling the Self-Selection Effect. Economic Research Report No. 85. U.S. Dept. of Agriculture, Economic Research Service; 2009.
33. Shaefer HL, Gutierrez IA. The Supplemental Nutrition Assistance Program and material hardships among low-income households with children. *Soc Serv Rev.* 2013;87:753–779.
34. Center on the Developing Child at Harvard University. How racism can affect child development. 2020; Available at: https://harvardcenter.wpenginpowered.com/wpcontent/uploads/2020/11/RacismInfographic_2020.pdf. Accessed on December 10, 2024.
35. Poole-Di Salvo E, Silver EJ, Stein REK. Household food insecurity and mental health problems among adolescents: what do parents report? *Acad Pediatr.* 2016;16:90–96. [PubMed: 26530851]
36. Nam J, Kwon SJ. Expansion of child tax credits and mental health of parents with low income in 2021. *JAMA Netw Open.* 2024;7:e2356419. 10.1001/jamanetworkopen.2023.56419 [PubMed: 38381435]
37. Parenting Programs – National Center for Children in Poverty. (n.d.). Retrieved 2024. Available at: <https://www.nccp.org/parenting-programs/>.

38. Whiteman ED, Chrisinger BW, Hillier A. Diet quality over the monthly Supplemental Nutrition Assistance Program Cycle. *Am J Prev Med.* 2018;55:205–212. [PubMed: 29935945]
39. Lavalley M, Galea S, Abuelezam NN. Supplemental Nutrition Assistance Program emergency allotments and food security, hospitalizations, and hospital capacity. *JAMA Network Open.* 2023;6:E2326332–e2326332. [PubMed: 37556142]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

WHAT'S NEW

We examined the association of food hardship with family resilience and connection and whether participation in the Supplemental Nutrition Assistance Program (SNAP) modifies this association. Food hardship was associated with lower family resilience and connection. SNAP did not modify the association.

Table 1.
 Characteristics of Households With Children Ages 6 to 17 Years, 2019–21 National Survey of Children's Health

	All Household (N = 82,068)		Households With Food Hardship (N = 20,686)		Households Without Food Hardship (N = 59,425)	
	Unweighted N	Weighted % (95% CI)	Unweighted N	Weighted % (95% CI)	Unweighted N	Weighted % (95% CI)
Food hardship						
Yes	20,686	30.5 (29.7, 31.2)				
No	59,425	69.5 (68.8, 70.3)				
Family Resiliency and Connection Index (FRCI)						
Low or moderate	39,987	48.3 (47.5, 49.1)	12,410	57.5 (55.9, 59.0)	27,451	44.3 (43.4, 45.2)
High	38,346	51.7 (50.9, 52.5)	7,659	42.5 (41.0, 44.1)	30,528	55.7 (54.8, 56.6)
SNAP participation in past 12 mo						
No	69,048	79.8 (79.1, 80.5)	14,576	64.8 (63.3, 66.2)	54,261	86.5 (85.7, 87.2)
Yes	10,755	20.2 (19.5, 20.9)	5,944	35.3 (33.8, 36.7)	4,760	13.6 (12.8, 14.3)
WIC participation in past 12 mo						
No	77,212	93.9 (93.4, 94.4)	19,129	90.4 (89.3, 91.4)	57,486	95.5 (94.9, 96.0)
Yes	2,489	6.1 (5.6, 6.6)	1,301	9.6 (8.6, 10.7)	1,169	4.6 (4.1, 5.1)
Participation in free and reduced lunch in past 12 mo						
No	56,393	59.9 (59.1, 60.7)	9,327	36.1 (34.7, 37.5)	46,895	70.4 (69.4, 71.3)
Yes	23,493	40.1 (39.3, 40.9)	11,239	63.9 (62.5, 65.3)	12,157	29.6 (28.7, 30.6)
Caregiver employment						
Unemployed	5,555	9.4 (8.9, 9.9)	2,583	14.6 (13.5, 15.7)	2,918	7.1 (6.6, 7.7)
Employed	73,964	90.6 (90.1, 91.1)	17,737	85.4 (84.3, 86.5)	55,805	92.9 (92.3, 93.4)
Caregiver education						
High school or less	13,716	30.3 (29.5, 31.2)	5,931	43.6 (42.1, 45.2)	7,238	24.0 (23.1, 25.0)
Some college	19,078	20.9 (20.3, 21.5)	7,449	29.0 (27.8, 30.3)	11,121	17.4 (16.7, 18.0)
College or higher	49,274	48.8 (48.0, 49.5)	7,306	27.4 (26.2, 28.6)	41,066	58.6 (57.7, 59.6)
Household income as % of FPL						
0%–99%	10,144	18.4 (17.7, 19.1)	4,700	29.1 (27.6, 30.5)	5,068	13.4 (12.7, 14.2)
100%–199%	13,657	21.5 (20.8, 22.2)	6,112	32.5 (31.1, 34.0)	7,132	16.6 (15.8, 17.4)
200%–399%	25,139	29.2 (28.5, 29.9)	7,207	29.2 (27.9, 30.6)	17,446	29.4 (28.6, 30.2)
≥400%	33,128	30.9 (30.3, 31.6)	2,667	9.2 (8.5, 10.0)	29,779	40.6 (39.8, 41.5)

	All Household (N = 82,068)			Households With Food Hardship (N = 20,686)			Households Without Food Hardship (N = 59,425)		
	Unweighted N	Weighted % (95% CI)	Unweighted N	Unweighted N	Weighted % (95% CI)	Unweighted N	Weighted % (95% CI)		
Child age (years)									
6–11 y	36,133	49.2 (48.4, 50.0)	9063		48.2 (46.7, 49.7)	26,187	49.6 (48.7, 50.5)		
12–17 y	45,935	50.8 (50.0, 51.6)	11,623		51.8 (50.3, 53.3)	33,238	50.4 (49.5, 51.3)		
Child race and ethnicity									
Hispanic	10,778	26.0 (25.1, 26.8)	3671		31.4 (29.9, 33.0)	6780	23.4 (22.4, 24.4)		
White, non-Hispanic	54,779	49.9 (49.1, 50.6)	12,162		41.1 (39.8, 42.4)	41,510	54.2 (53.3, 55.1)		
Black, non-Hispanic	5713	13.7 (13.2, 14.3)	2132		18.1 (17.0, 19.2)	3341	11.5 (10.9, 12.1)		
Multiracial/Non-Hispanic/Other	10,798	10.5 (10.1, 10.9)	2721		9.5 (8.7, 10.2)	7794	11.0 (10.5, 11.5)		
Immigration history									
Child of immigrant parents	14,433	26.6 (25.8, 27.4)	3306		26.1 (24.5, 27.6)	11,003	27.4 (26.5, 28.4)		
Child of US born parents	66,209	73.4 (72.6, 74.2)	17,129		73.9 (72.4, 75.5)	47,778	72.6 (71.6, 73.5)		
Family size									
Small family (4 or less family members in the home)	59,261	60.1 (59.3, 60.9)	14,599		59.9 (58.4, 61.5)	44,175	60.2 (59.2, 61.1)		
Large family (5 or more family members in the home)	20,161	40.0 (39.1, 40.7)	5642		40.1 (38.5, 41.7)	14,359	39.8 (38.9, 40.8)		

FPL indicates federal poverty level; SNAP, Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

FPL indicates federal poverty level; SNAP, Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

Table 2.
Association of Household Food Hardship and Food Insufficiency With High Family Resilience and Connection, 2019–21 National Survey of Children’s Health

	Adjusted* Risk Ratio (95% CI) for High Family Resilience and Connection
Household food hardship	
Did not experience food hardship	1.00
Experienced food hardship	0.73 (0.69, 0.76)
Household food insufficiency	
Did not experience food insufficiency	1.00
Experienced food insufficiency	0.77 (0.69, 0.86)

* Adjusted for family income (0%–99%, 100%–199%, 200%–399%, or ≥400% federal poverty level), highest education level achieved of caregiver(s) within the household (high school or less, some college, or college or higher), child race and ethnicity (Hispanic, White non-Hispanic, Black non-Hispanic, or Multiracial/non-Hispanic/Other), household participation in the Special Supplemental Nutrition Program for Women, Infant, and Children during the past 12 months, household participation in Supplemental Nutrition Assistance Program during the past 12 months, household participation in Free or Reduced Lunch in the past 12 months, family size, immigration history, and caregiver employment (unemployed or employed).

Table 3.

Association of Household Food Hardship With High Family Resilience and Connection Among Families With Incomes < 200% of the Federal Poverty Level That Did and Did Not Participate in the Supplemental Nutrition Assistance Program, 2019–21 National Survey of Children’s Health

	Adjusted* Risk Ratio (95% CI) for High Family Resilience and Connection
Among households that participated in SNAP	
Did not experience food hardship	1.00
Experienced food hardship	0.71 (0.65, 0.78)
Among households that did not participate in SNAP	
Did not experience food hardship	1.00
Experienced food hardship	0.71 (0.65, 0.77)

* Adjusted for family income (0%–99%, 100%–199%, 200%–399%, or ≥400% federal poverty level), highest education level achieved of caregiver(s) within the household (high school or less, some college, or college or higher), child race and ethnicity (Hispanic, White non-Hispanic, Black non-Hispanic, or Multiracial/non-Hispanic/Other), household participation in the Special Supplemental Nutrition Program for Women, Infant, and Children during the past 12 months, household participation in Free or Reduced Lunch in the past 12 months, family size, immigration history, and caregiver employment (unemployed or employed).