Association and Disparities of Food Security and Child Abuse: Analysis of the National Survey of Children's Health

Molly Bloom, B.S.,[1] Cassie McCoy, B.S.,[1] Michael A. Baxter.,[2] Sara Coffey, D.O.,[3] Amy D. Hendrix-Dicken, M.A.,[2] Micah Hartwell, Ph.D.[1,3]

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma; 2.Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma; 3.Oklahoma State University Center for Health Sciences, Department of Pediatrics, Tulsa, Oklahoma

INTRODUCTION

- At least 1 in 7 children have experienced child abuse or neglect, with children from families of lower socioeconomic status exhibiting a five times greater rate of child abuse.[1,2]
- Given that 20% of children in food-insecure homes experience parental aggression compared to 7% in food-secure households, assessing the relationship between child abuse and food insecurity is critical.[3]
- Rates of child abuse and food insecurity also disproportionately affect children of different demographic groups, especially racial/ethnic minority groups.

OBJECTIVES

- To assess the relationship between child abuse and food insecurity among children.
- To identify associations between food insecurity, child abuse, and varying demographic factors.

METHODS

Data
- We assessed the National Survey of Children's Health (NSCH 2016-2021) to investigate the relationship between child abuse and food security.[4]
- Using survey weights provided by the NSCH, we determined population estimates and rates of children experiencing food insecurity and child abuse.

Statistical Analysis
- We then constructed logistic regression models to assess associations, via odds ratios (OR), between food security groups and whether the child experienced child abuse.
- Finally, we constructed logistic regression models via odds ratios to assess food security and child abuse by demographic factors.
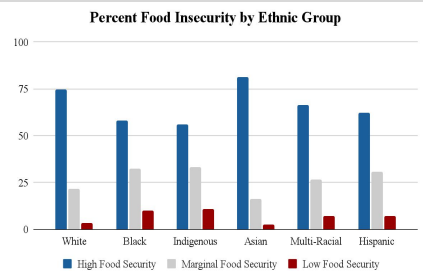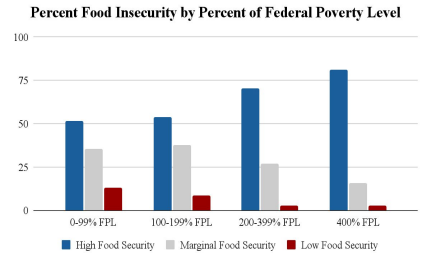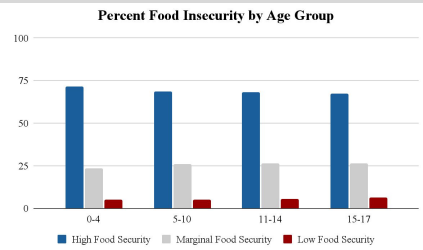
RESULTS

Percent Food Insecurity by Age Group

Percent Food Insecurity by Percent of Federal Poverty Level

Percent Food Insecurity by Ethnic Group

Table 1. Interaction terms for race and food security on child abuse		
Food Security Grouping	Race/Ethnicity	Interaction Term AOR (95% CI)
High Food Security	White	1 [Reference]
	Black	**1.61 (1.37-1.88) ***
	Indigenous	**2.1 (1.45-3.03) ***
	Asian	0.78 (0.59-1.03)
	Multi-racial	1.71 (1.44-2.04)
	Hispanic	1.11 (0.94-1.31)
Marginal Food Security	White	**2.58 (2.34-2.84) ***
	Black	**3.59 (3.03-4.26) ***
	Indigenous	**4.82 (3.49-6.67) ***
	Asian	0.98 (0.68-1.42)
	Multi-racial	4.09 (3.43-4.86)
	Hispanic	2.44 (2.07-2.87)
Low Food Security	White	**7.02 (5.95-8.27) ***
	Black	**6.78 (5.31-8.65) ***
	Indigenous	**9.26 (4.87-17.63) ***
	Asian	0.91 (0.41-2.02)
	Multi-racial	8.26 (5.67-12.04)
	Hispanic	5.27 (3.94-7.07)

Controlling for food security, age, and % FPG; * P < 0.05

RESULTS

- While rates of food security were similar across age groups, households with lower income had higher rates of marginal or low food security, as well as homes with Black, Indigenous, multi-racial, and Hispanic children.
- Compared to those with high food security, the odds of children with marginal or low food security were significantly more likely to experience child abuse (AORs: 2.36, 95% CI: 2.17-2.57 and 5.24, 95% CI: 4.59-6.00, respectively).
- Compared to White children with high food security, Indigenous, Black, and White children were significantly more likely to experience child abuse as household food security decreased (Table 1).

CONCLUSION

- Child abuse and food security have a significant association, including overlapping contributory factors.
- Efforts to improve food security through policy, community food banks, and school-based programs may secondarily reduce child abuse.
- To address the disparities among racial/ethnic groups, the expansion of culturally competent, evidence-based programs to reduce food insecurity should be established, which may also reduce risk factors for child abuse.

REFERENCES

1. Zeanah CH, Humphreys KL. Child Abuse and Neglect. *J Am Acad Child Adolesc Psychiatry*. 2018;57(9):637-644.
2. Fast facts: Preventing child abuse & neglect. Published May 31, 2022. https://www.cdc.gov/violenceprevention/childabuseandneglect/fastfact.html
3. Hunter AA, Flores G. Social determinants of health and child maltreatment: a systematic review. *Pediatr Res*. 2021;89(2):269-274.
4. National Survey of Children's Health. Child and Adolescent Health Measurement Initiative (CAHMI),"2020 NSCH: Child Health Indicator and Subgroups Stata Codebook, Version 1.0." Published online 2021.