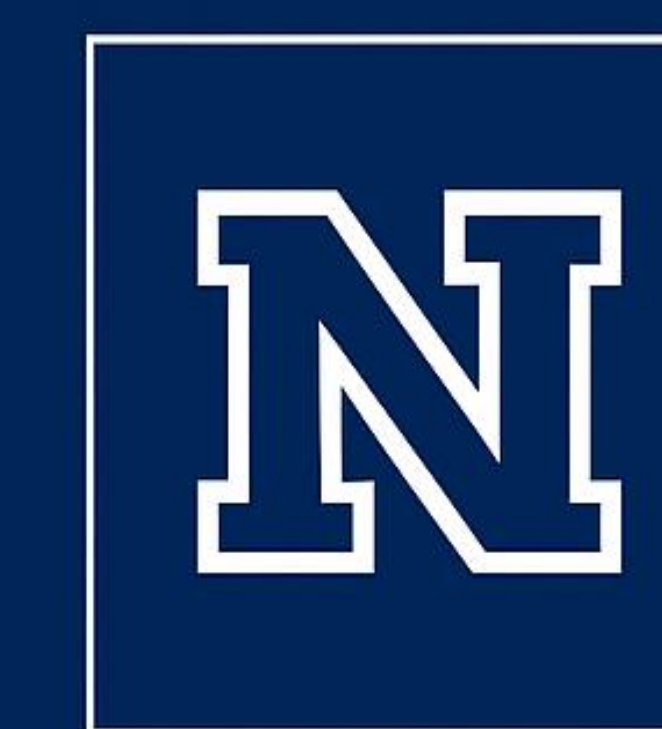


Bedtime and Behavior: Investigating Food Insecurity and Emotional Health in U.S. Children

Reshika Rimal¹, Ann Weber¹

¹School of Public Health, University of Nevada, Reno



**School of
Public Health**
University of Nevada, Reno

Introduction

- Food insecurity affects ~18% of U.S. households with children¹.
- Linked to behavioral issues like anxiety, aggression, and attention problems².
- Bedtime consistency may promote emotional stability and behavior regulation³.
- This study investigates whether food insecurity increases the odds of behavioral problems in children and whether consistent bedtime routines modify this relationship.

Methods

Design: Cross-sectional study using 2022–2023 NSCH data.

Sample: 28,683 children aged 6–11.

Exposure: Household food insecurity (binary).

Outcome: Caregiver-reported behavioral/conduct problems.

Effect Modifier: Bedtime consistency (consistent vs. inconsistent).

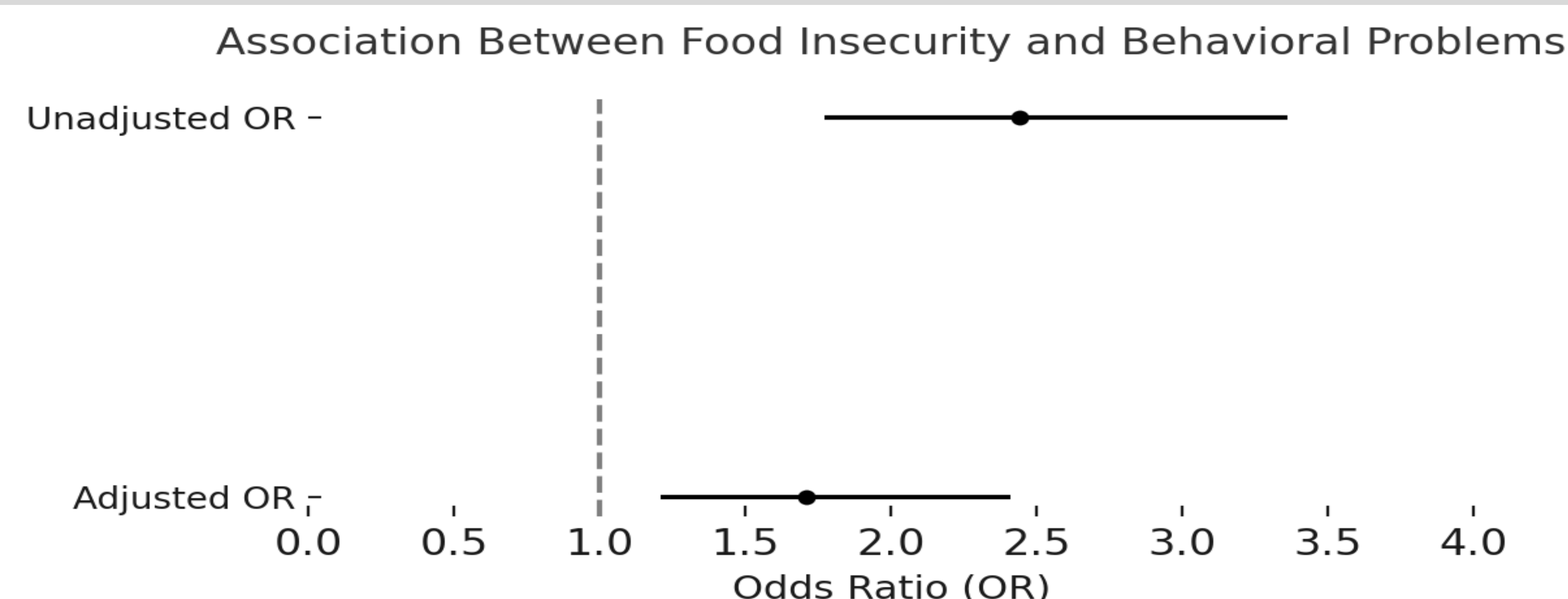
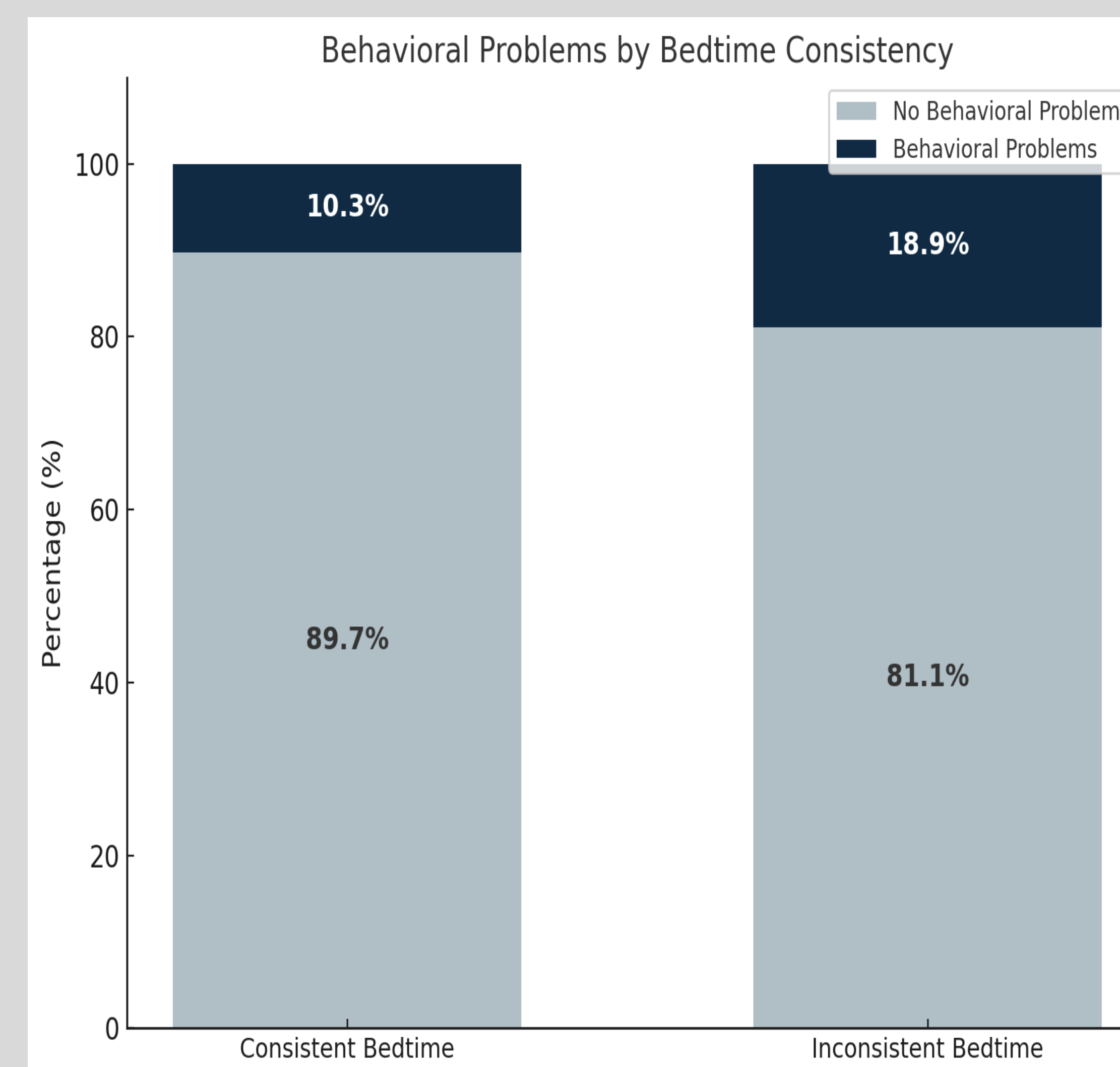
Covariates: Family structure, parental education, neighborhood safety, and family poverty level.

Analysis:

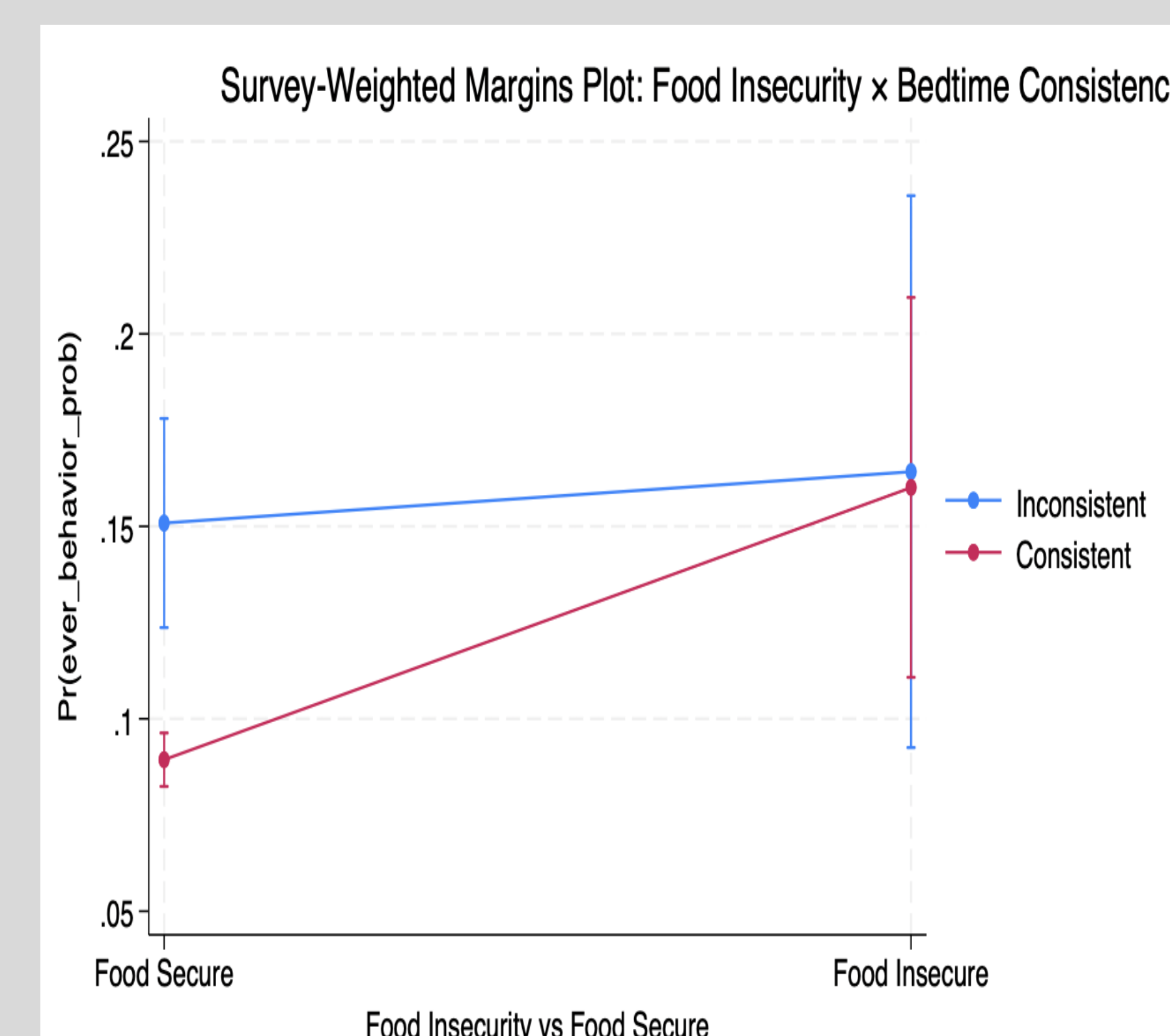
- Survey-weighted logistic regression.
- Interaction tested on multiplicative (OR) and additive scales.

Results

- **Food insecurity** was reported in **3.1%** of children with consistent bedtime routines and **9.9%** of those with inconsistent routines.



- **Food insecurity** was associated with **behavioral problems** only among children with **consistent bedtimes** (OR = 1.97; 95% CI: [1.30, 2.92]).
- No significant association in the inconsistent group (aOR = 1.10, 95% CI: [0.63, 1.97]).
- Interaction not significant RERI = 0.42 (95% CI: [-0.29, 1.14]).

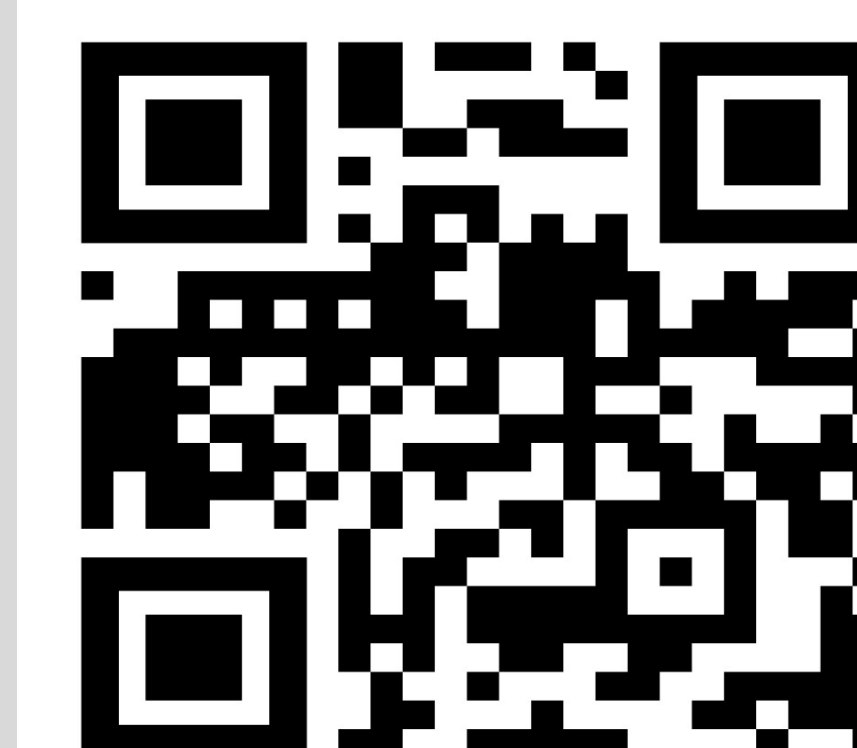


Discussion & Conclusions

- **Food insecurity** was associated with higher odds of behavioral problems among U.S. children aged 6–11.
- **Consistent bedtime routines** were linked to better behavioral outcomes but did not significantly modify the effect of food insecurity.
- **Lack of interaction** may be due to limited power in stratified groups and multiple stressors in food-insecure households.
- **Findings align** with prior research connecting economic hardship to poor child mental health⁴.
- **Improving food security** is essential to support children's emotional and behavioral development.
- **Interventions** should address structural needs (e.g., food access) and promote healthy family routines.
- **Potential misclassification bias** (e.g., inaccurate caregiver reporting) may have attenuated observed associations.

Acknowledgement

I want to express my heartfelt gratitude to **Dr. Weber** for her invaluable guidance, support, and encouragement throughout this project. I am also sincerely thankful to the **School of Public Health** for providing the resources, academic environment, and learning opportunities that made this project possible.



**Scan to Access Full Paper and
Additional Materials**