



**RACIAL/ETHNIC DISPARITIES IN CONSUMPTION OF
FATTY/SUGARY FOOD AMONG PRESCHOOLERS
VARY BY LEVEL OF PARENTAL PERCEPTION OF CHILD WEIGHT IN
THE FIRST 2 YEARS-OF-LIFE**

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Outline

- Background
- Objective, research questions
- Methods
- Results
- Conclusions, potential mechanisms

Background (1): Racial/ethnic disparities in childhood obesity

- Begin early in life
 - 2–5 year old children (preschoolers) in 2011–2012, the overweight or obesity prevalence was 20.9% among non-Hispanic Whites (NHW) but higher among non-Hispanic Blacks (NHB) and Hispanics (21.9 and 29.8%, respectively).
- Evidence indicates that racial/ethnic disparities in child obesity are not fully explained by differences in socioeconomic status.
- Include most known risk factors
 - Child diet
 - Intake of sugar-sweetened beverages, fast food, fruit and vegetables

Background (2): Child diet is influenced by parental (caregiver) perception of child weight

- Early child diet is strongly influenced by parental attitudes, beliefs and practices regarding child feeding.
- Parental perception of child weight – NOT based on growth charts
 - Extent of “awareness” of child weight
 - How the caregiver “views” their child’s hunger
 - Affected by social and cultural determinants

Parental perception of child weight: recognition of ...

child's physical
appearance



child's functional
abilities



child psychosocial
factors (e.g., self
esteem, teasing by
peers)

Objective and Research Questions

- Examine the contribution of parental perception of child weight in the first 2 years-of-life to differences in child diet quality as moderated by maternal race/ethnicity
 - RQ1: How does child diet differ by maternal race/ethnicity?
 - RQ2: How does parental perception of child weight in the first 2 years-of-life contribute to this relationship?

Methods (1): STRONG Kids cohort

- Preschool children from East–Central Illinois.
- Parental perception of child weight in the first 2 years–of–life (PP): 2 items that address parental perception of the child’s weight at 0–11 months and 12–23 months (Child Feeding Questionnaire, Birch et al., 2001).
- Child diet: Intake of sugary beverages, French fries, fast food, candy/sweets and salty snacks were summed to create a measure of total fatty/sugary foods per day. Fruits and vegetables/soy–based or vegetarian products were summed to create a measure of total fruit/vegetables per day (U.S. Department of Education’s Early Childhood Longitudinal Study, Birth Cohort (ECLS–B) diet

Methods (2): STRONG Kids cohort

- Mean child diet was examined across maternal race/ethnicity using Kruskal Wallis test.
 - Stratified by categories of PP (non-overweight (NO) and overweight (OW)).
- The association of PP with child diet as the outcome was tested using multivariable logistic regression after controlling for race/ethnicity, breastfeeding history, child age and gender, education, income, employment, WIC.

Results (1): Study sample

Child 's current age (months)	39.0 ± 8.2
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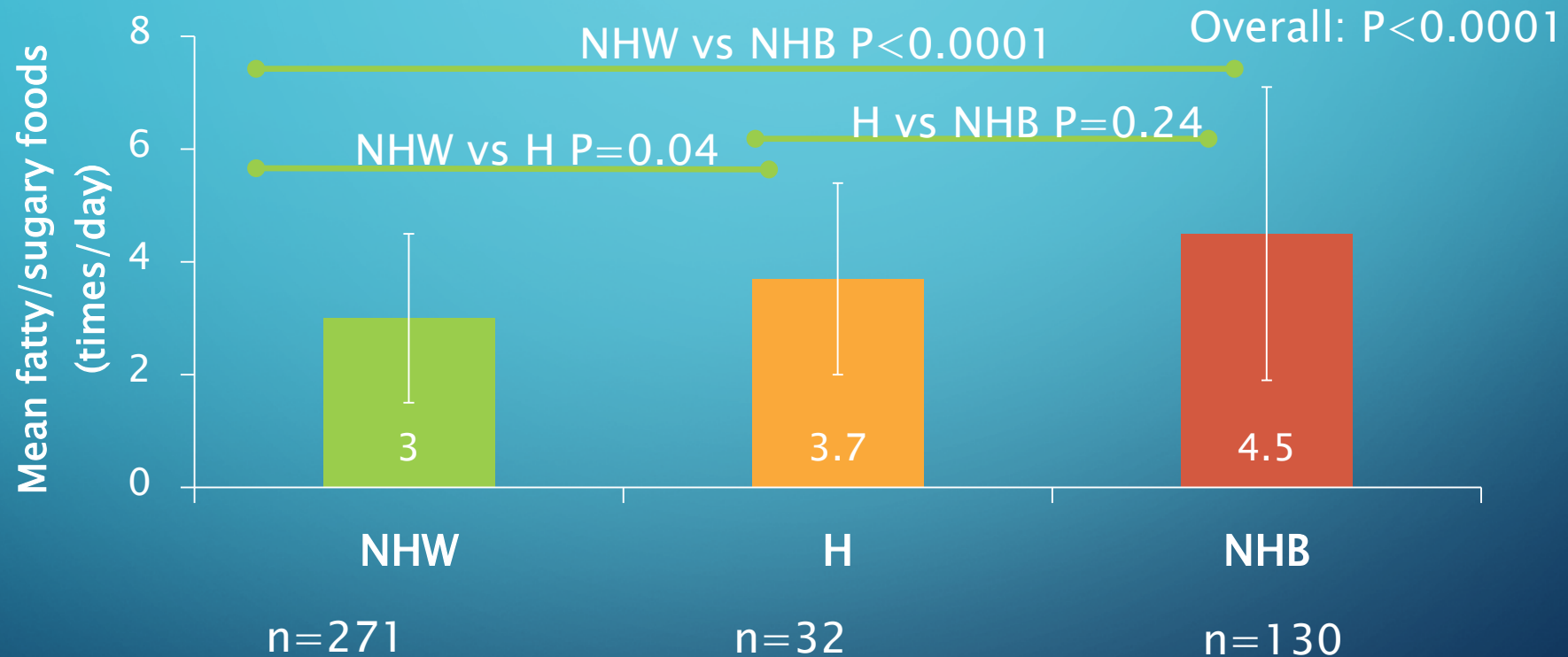
Child's gender	n (%)
Female	243 (48.9)
PP	
NO	440 (88.5)
OW	44 (8.9)
Child BMI percentile	
NO	313 (62.9)
OW	94 (18.9)
Breastfeeding history	
Never breastfed	137 (27.6)
Breastfed <6 months duration	179 (36.0)
Breastfed ≥6 months duration	181 (36.4)

Race/ethnicity	n (%)
Hispanic	34 (6.8)
Non-Hispanic Black	131 (26.4)
Non-Hispanic White	278 (55.9)
Other	54 (10.9)
Education	
Grade School/ High School	68 (13.7)
College/Technical School	159 (31.9)
College Graduate/Post-Graduate Work	268 (53.9)
Annual household income	
≤\$24,000	141 (28.4)
\$25,000–\$69,999	141 (28.4)
≥\$70,000	176 (35.4)
Employment status	
Employed	318 (63.9)
Unemployed	27 (5.4)
Retired/disabled/stay at home	51 (10.3)
Student	96 (19.3)

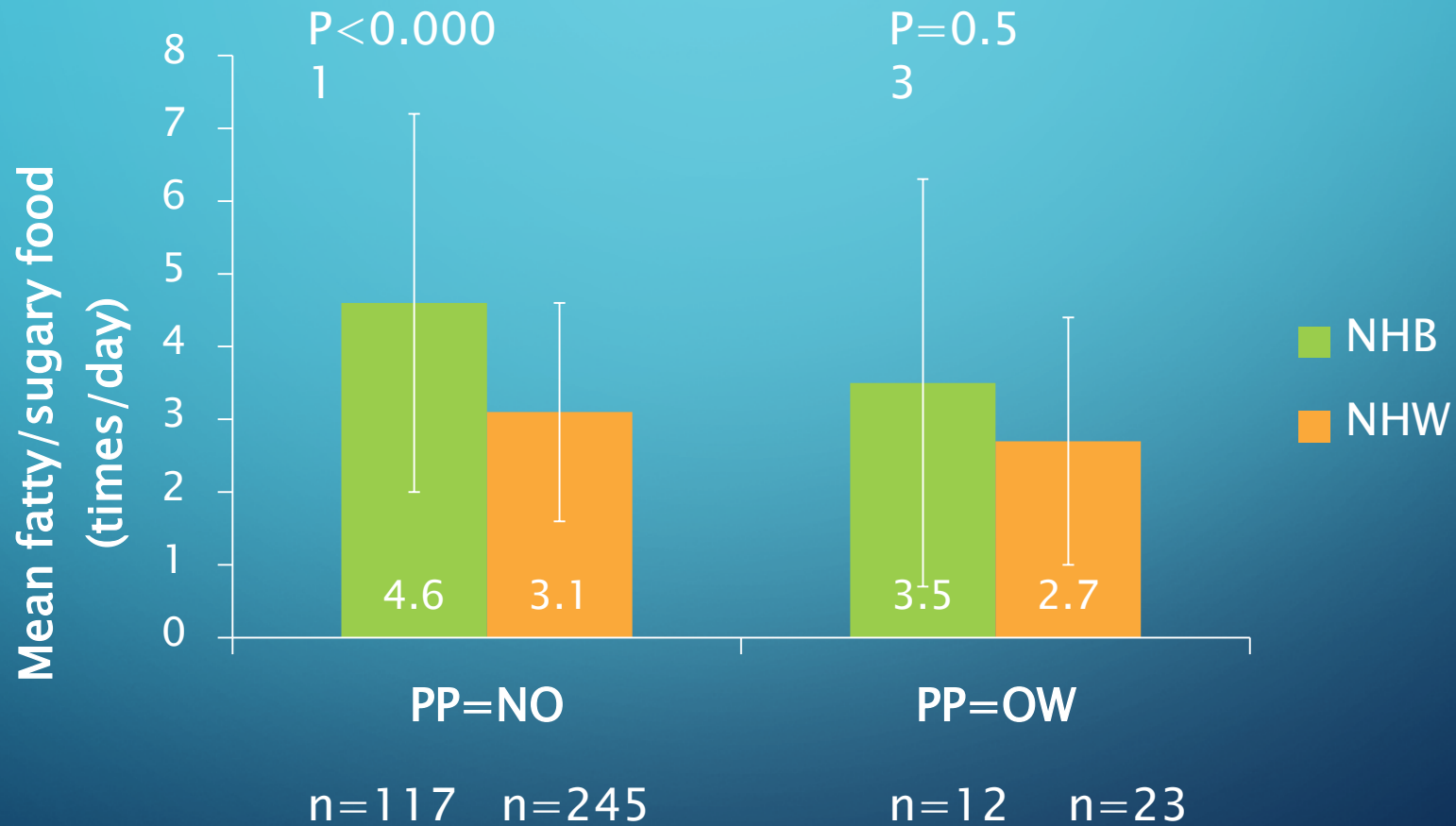
Some percentages do not add up to 100 due to mis

Results (2):

RQ1: HOW DOES CHILD DIET DIFFER BY MATERNAL RACE/ETHNICITY?



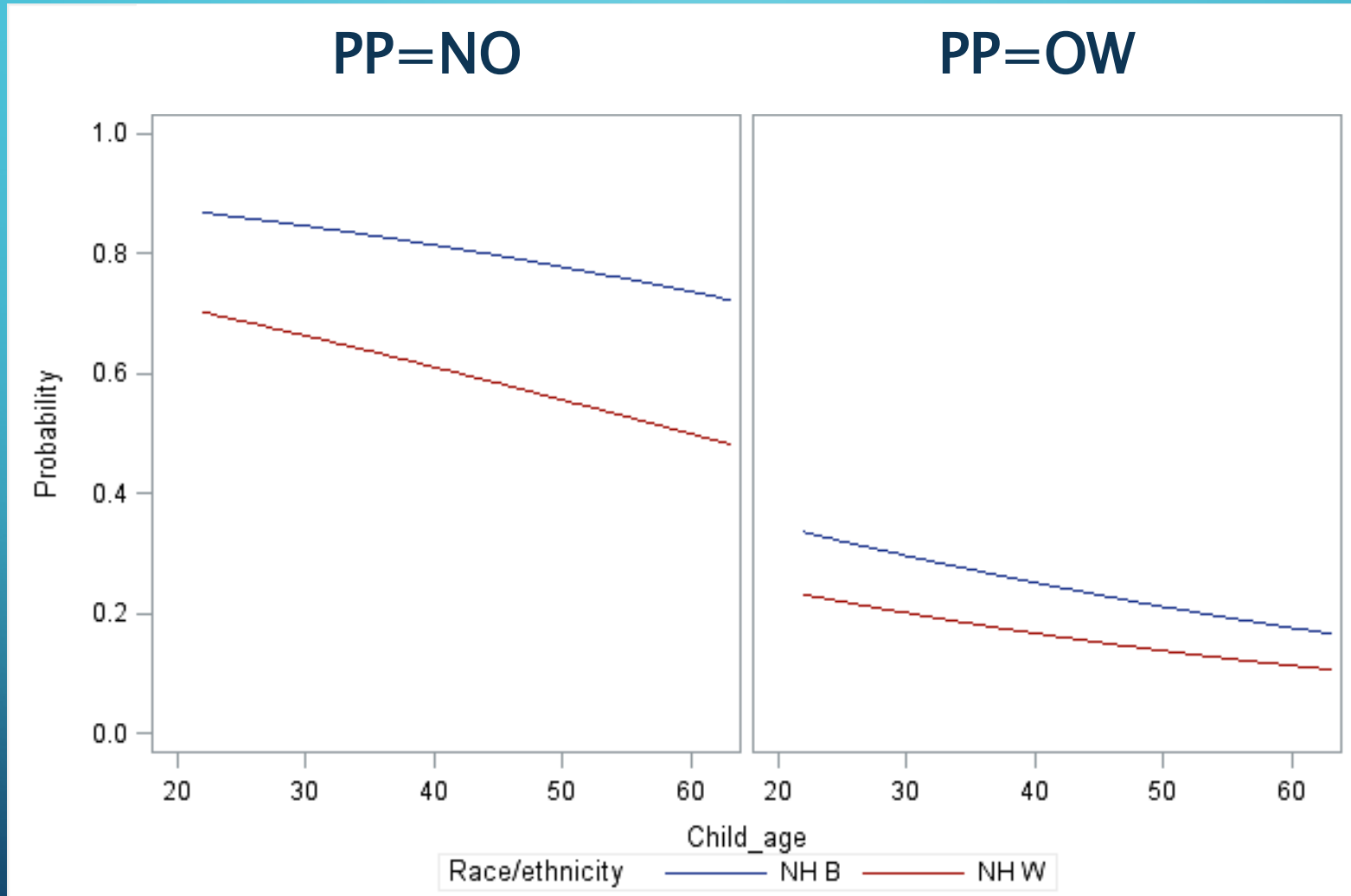
RQ2: HOW DOES PARENTAL PERCEPTION OF CHILD WEIGHT IN THE FIRST 2 YEARS-OF-LIFE CONTRIBUTE TO THIS RELATIONSHIP?



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Effect used in logistic regression model	Odds Ratio for high fatty/sugary foods (>4 vs. ≤ 4 times/day)	95% Wald Confidence Limits	
<i>Race/ethnicity</i>			
NH B vs NH W	2.5	1.4	4.4
H vs NHW	2.6	1.1	6.3
Other vs NHW	1.1	0.4	2.9
<i>PP. NO vs OW</i>	8.2	1.7	38.2
<i>Education</i>			
High School or less vs College	1.4	0.6	3.4
Some College/Technical School vs College	1.3	0.7	2.5
<i>Income</i>			
\$24,999 or less vs \$70,000 or more	2.1	0.9	4.9
\$25,000 to \$69,999 vs \$70,000 or more	1.9	1.0	3.7
<i>Employment</i>			
Employed vs Unemployed	0.5	0.2	1.5
Retired/disabled/at home vs Unemployed	0.6	0.2	2.1
Student vs Unemployed	0.3	0.1	1.0
<i>WIC: yes vs no</i>	0.6	0.3	1.1
<i>Child age</i>	0.9	0.9	1.0
<i>Child gender: female vs male</i>	0.9	0.5	1.4
<i>Breastfeeding</i>			

Predicted probability of high fatty/sugary food intake is highest among NHB perceived as NO in the first 2 years-of-life



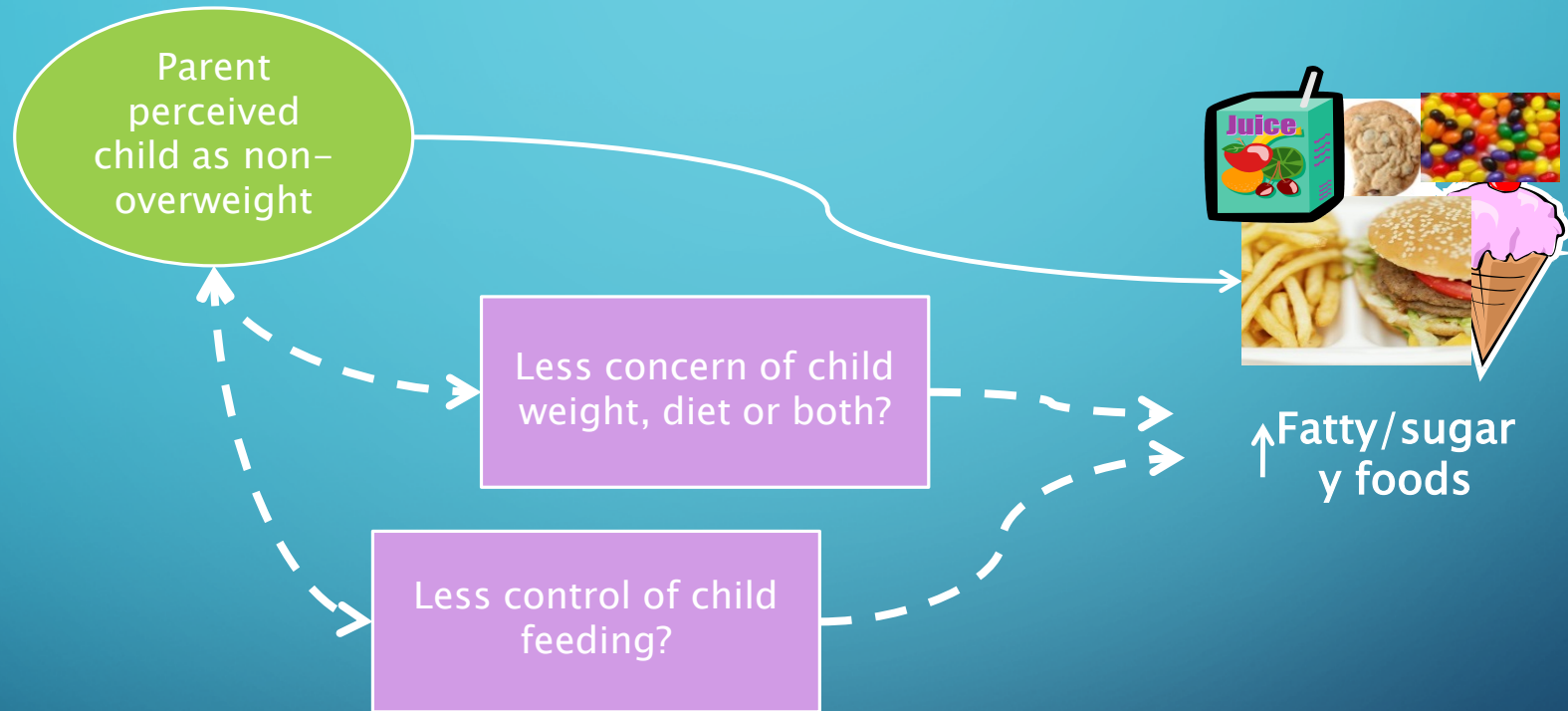
CONCLUSIONS

- Preschoolers' consumption of fatty/sugary foods is highest among Non-Hispanic Black children that were perceived to be non-overweight in the first 2 years-of-life.
- Parental perception of child weight in the first 2 years-of-life is a potential modifiable risk factor for unhealthy child diet and obesity
 - Contributes to racial/ethnic differences in child diet quality and quantity.
 - Pending testing the interaction effect, replication in other samples
- Affects caregiver receptiveness to messages regarding prevention of excessive weight gain and positive body image
 - early childhood interventions to reduce racial/ethnic disparities in child obesity prevalence.

STRONG KIDS DATA

First 2 years of life

Preschool years



Potential mechanisms for the association of parental perception of child weight in the first 2 years of life with child intake of fatty/sugary foods in the preschool years are indicated in broken lines. Lines with double arrows indicate unknown directionality.

STRENGTHS AND LIMITATIONS

- Both healthy and unhealthy child diet was examined
- Parental perception of child weight was assessed using a validated questionnaire designed for an age group that included our sample
- Cross sectional – cannot determine causality
- Child diet (past 7 days) and parental perception of child weight in the first 2 years–of–life depended on parental recall – potential recall bias
- We do not know the child weight and height during the first 2 years–of–life to directly compare with parental perception at that time point
- Other potential confounders (e.g., parent BMI)

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