

BACKGROUND

- With a prevalence rate of 13.9%, obesity among preschoolers from low-income backgrounds in Detroit persists.
- Among families from low-income backgrounds, preschooler obesity risk is higher if their caregivers report Authoritarian (high demands, low responsiveness to child requests) or Indulgent (low demands, high responsiveness) feeding styles and lower if their caregivers report an Authoritative feeding style (high but reasonable demands and responsive).
- Caregiver feeding styles may also impact preschooler weight status by the types of foods children consume (dietary quality), but this emergent literature has focused primarily on Hispanic families.

AIM

Examine the relationship between caregiver's feeding style, preschooler obesity, and preschooler dietary quality in a primarily African-American population.

METHODS

- Caregiver-preschooler dyads (N=33, 88% African American) were recruited from Detroit WIC clinics.
- Measures**
 - Height and weight measures were obtained via standard procedures and used to tabulate body mass index percentile (BMI)ile; preschoolers) and body mass index (BMI; caregivers).
- Sociodemographic characteristics* self-reported by caregivers.
- Caregiver Feeding Style Questionnaire (CFSQ; Hughes et al., 2005)*: caregiver report of how often they engage in 12 parent- and 7 child-centered feeding directives. Median split of two subscales (demandingness and responsiveness) used to derive 4 feeding styles.
- Block Kids Food Screener (Garcia-Dominic et al., 2011)*: caregiver report of child's diet (average daily intake of specific foods). Responses categorized into food groups using the USDA Nutrient Database for Standard Reference.
- Statistical analyses**
 - Chi-squared analyses to examine associations between preschooler obesity status and caregiver feeding style.
 - Independent samples t-tests to examine differences in preschooler average weekly intake of fruits, vegetables, whole grains, protein, dairy, saturated fats and added sugars by preschooler weight status.
 - Visual comparisons between preschooler dietary intake based on caregiver's feeding style and the USDA age-based recommendations for the aforementioned food groups.

SAMPLE CHARACTERISTICS

Table 1. Sample Characteristics [Mean±SD)/Percent(n)]

Variable	Overall (N=33)	Obese (N=16)	Healthy Weight (N=17)
<i>Preschooler</i>			
Age (years)	3.59 ± 0.67	3.78±0.55	3.41±0.74
BMI (percentile)	77.11 ± 27.49	97.85±1.72	57.60±25.95
% male	54.5% (18)	56% (9)	53% (9)
% African American		100%	77% (13)
<i>Caregiver</i>			
Age (years)	34.15 ± 7.88	37.00±7.87	31.47±7.09
BMI	35.79 ± 8.17	35.43±7.80	36.12±8.73
≤High School Education	60.6% (20)	77% (13)	44% (7)
% single	66.7% (22)	63% (10)	71% (12)
% African American	87.9% (29)	100%	77% (13)
<i>Relationship to child</i>			
Mother	90.9% (30)	94% (15)	88% (15)
Grandmother	9.1% (3)	6% (1)	12% (2)
% Unemployed	67% (22)	63% (10)	65% (11)
<i>Family*</i>			
Annual income>\$30,000	73% (24)	63% (10)	82% (14)
SNAP recipient	69.7%(23)	75% (12)	65% (11)

*All families are involved in the WIC program

RESULTS

Table 2. Preschooler Weight Status by Caregiver Feeding Style

Weight Status	Authoritative (N=8)	Authoritarian (N=10)	Indulgent (N=9)	Uninvolved (N=6)
Obese	5	4	5	2
Healthy Weight	3	6	4	4

$\chi^2_{(3, N=33)} = 1.65, p=0.65$

Table 3. Comparison of Preschooler Dietary Intake (Mean±SD) by Preschooler Weight Status

Food Group	Obese (N=16)	Healthy Weight (N=17)	t	p
Fruit	1.84 ± 1.03	1.39 ± 0.79	1.39	0.18
Vegetables	0.86 ± 0.83	0.51 ± 0.26	0.02	0.99
Whole grains	0.89 ± 0.79	0.44 ± 0.25	0.06	0.95
Protein	2.84 ± 2.07	2.59 ± 1.97	0.88	0.39
Dairy	1.92 ± 0.82	1.47 ± 0.83	1.07	0.29
Saturated Fat	19.85 ± 10.72	15.73 ± 7.72	0.20	0.84
Added sugar	5.93 ± 5.17	3.62 ± 2.32	0.97	0.34

RESULTS

Table 4. Comparison of Preschooler Dietary Intake (Mean±SD) by Caregiver Feeding Styles with the USDA age-based recommendations.

Food Group	Recommendation	Authoritative	Authoritarian	Indulgent	Uninvolved
Fruit	1.5 cups	1.84 ± 1.03	1.39 ± 0.79¹	2.19 ± 1.06	2.07 ± 1.15
Vegetables	1.5 cups	0.86 ± 0.83	0.51 ± 0.26	0.51 ± 0.30	0.51 ± 0.33
Whole grains	2.5 ounces	0.89 ± 0.79	0.44 ± 0.25	0.57 ± 0.41	0.76 ± 0.39
Protein	4 ounces	2.84 ± 2.07	2.59 ± 1.97	1.77 ± 0.70	1.90 ± 2.11
Dairy	2.5 cups	1.92 ± 0.82	1.47 ± 0.83	1.50 ± 0.69	2.14 ± 0.84
Saturated Fat	11-16 grams	19.85 ± 10.72	15.73 ± 7.72	13.19 ± 2.98	15.90 ± 12.12
Added sugar	<6 teaspoons	5.93 ± 5.17	3.62 ± 2.32	4.01 ± 1.89	3.70 ± 1.56

Bolded values do not meet the recommendations

CONCLUSION

- Our findings suggest that caregiver feeding style may not be related to obesity status or dietary intake among preschoolers from low-income and primarily African American backgrounds.
- Findings that preschoolers were not meeting recommendations for vegetables, whole grains, dairy and protein are surprising because families were receiving nutrition counseling and vouchers to purchase foods in these groups as part of their WIC participation.
- Future research is needed to examine whether these patterns are replicated with a larger sample. Studies should also focus on identifying strategies that are acceptable to all caregivers no matter their feeding style that can help to increase preschooler intake of foods that are important for child development.

PUBLIC HEALTH IMPLICATIONS

This line of research stands to make a significant public health impact because it focuses on a population that is at high risk for obesity and because WIC is a nationally-based program that serves approximately 2.5 million preschoolers.

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