

Racial/Ethnic Disparities for Family Meals in a population-based cohort of two-year old children

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Introduction

- Family meals have an important role in children’s social, emotional, and cognitive development
 - Enhanced language development skills & academic achievement
 - Reduced risk of obesity, depression, & substance abuse
- Mealtime offers a natural opportunity for parental influence and enhanced family cohesion
- Family meals can improve children’s life-style related health behaviors, such as dietary habits and mealtime behavior

Significance

- Research on family meals has been primarily limited to Caucasian populations
- Racial/ethnic and socioeconomic disparities have been demonstrated in obesity and adverse health outcomes, but there is little research exploring risk factors of sharing family meals
- This study explores the demographic characteristics of families eating meals together.

Methods

- The Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey on experiences before, during and after pregnancy
 - A stratified random sample of mothers are selected within 2 to 6 months after a live birth from Oregon Birth Certificate files
- PRAMS-2 is a follow-up survey conducted when the child reaches 2 years of age.
- This study analyzes the 2004-2005 birth year cohort
 - 5,620 mothers sampled in PRAMS
 - 3,883 responded to PRAMS
 - 1,911 responded to PRAMS-2
- Combined weighted response rate = 43.5%

Methods

The ‘06/’07 PRAMS-2 survey included the question:

- Does your family eat meals together?
 - Always
 - Usually
 - Sometimes
 - Never
- Mothers who reported “always” or “usually” having family meals were compared with those who reported “sometimes” or “never.”

Methods

- Family meal frequency (always/usually versus sometimes never) is the dependent outcome variable
- Maternal race/ethnicity & poverty status are the primary predictor variables for family meals
- Potential confounders considered for the model were selected based on a literature review:
 - Maternal age, education, marital status, employment status, birth order, nativity, household size, WIC, special health care needs, childcare arrangements, and county type

Methods

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- Descriptive statistics and simple logistic regression models were run to evaluate the univariate associations between family meal frequency and each predictor variable, and potential confounders
- Variables were selected for the multivariate model based on significant univariate associations and scientific relevance as cited in the literature. Variables with high multi-collinearity were excluded from the model.
- Data were analyzed with STATA 11.1 using weighted survey techniques

Results

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- Of 1,875 respondents with live births in 2004-2005, 87.8% reported “always” or “usually” having family meals
- In a multivariate model, maternal race/ethnicity was significantly associated with family meal frequency, after adjusting for poverty status, maternal age, marital status, birth order, and employment status
- Compared to Non-Hispanic (NH) Whites, Hispanics, NH Blacks, and NH Asians were less likely to report always or usually having family meals
 - Hispanics (Adjusted OR: 0.44; 95% CI: 0.26, 0.74)
 - NH Blacks (Adjusted OR: 0.47; 95% CI: 0.27, 0.81)
 - NH Asians/PI (Adjusted OR: 0.53; 95% CI: 0.31, 0.92)

Multivariate Model Predicting Family Meals

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Characteristic	N (unweighted)	Always-Usually Family Meals (weighted %)	Adjusted OR (95% CI)
Maternal Race/Ethnicity (BC)			
NH White	823	90.6%	Referent
Hispanic	359	79.7%	0.44 (0.26, 0.74)
NH Black	187	78.0%	0.47 (0.27, 0.82)
NH AI/AN	217	85.1%	0.62 (0.36, 1.08)
NH Asian/PI	283	83.7%	0.52 (0.32, 0.84)
Poverty Status (P2)			
< 50% FPL	253	81.8%	Referent
50-99% FPL	246	80.1%	0.91 (0.48, 1.75)
100-199% FPL	394	89.6%	1.59 (0.82, 3.08)
200-299% FPL	467	90.8%	1.71 (0.83, 3.54)
≥ 300% FPL	368	92.1%	2.4 (1.09, 4.36)

BC = Birth Certificate; P2 = PRAMS-2

Family Meals Multivariate Model - Covariates

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Characteristic	N (unweighted)	Always-Usually Family Meals (weighted %)	Adjusted OR (95% CI)
Maternal Age (P2)			
< 25 years	349	85.7%	Referent
25 - 34 years	991	88.5%	0.74 (0.40, 1.38)
> 34 years	535	88.3%	0.60 (0.31, 1.17)
Marital Status (P2)			
Married	1387	89.4%	Referent
Not Married	482	82.9%	0.77 (0.43, 1.38)
Birth Order (BC)			
1	843	85.4%	Referent
>1	1031	89.7%	1.67 (1.05, 2.71)
Maternal Employment Status (P2)			
Full time or part time	1033	86.5%	1.48 (0.93, 2.37)
Unemployed	830	89.3%	Referent

Discussion

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- Minority racial/ethnic groups are less than half as likely as White to report always or usually having family meals
- Racial/ethnic disparities may reflect differences in cultural & socioeconomic factors affecting family eating habits
- Unmeasured confounding such as single parenting and work schedules might play a bigger role in family meal frequency
- Future surveys on family meals may address food preparation, healthfulness, & quality of the family environment

Public Health Implications

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- Early childhood disparities in family meal frequency among racial/ethnic minorities could influence adolescent well-being
- Underlying socioeconomic factors that affect high risk families may include employment opportunities and stability of the home environment
- Demographic disparities may be addressed with increased efforts in targeted family meal campaigns
- Understanding the barriers to family meals can inform family-based interventions and policy to improve early childhood development