



Does Disadvantage Start at Home? Racial and Ethnic Disparities in Early Childhood Home Routines, Safety, and Educational Practices/Resources

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Background

Studies show home environment parents create for a young child—including family routines, safety measures, and reading activities—affects children's health and future school success

- Children who have dinner less often with their family at greater risk for poor school performance, substance abuse, alcohol use, smoking cigarettes, and poor diet
- Number of hours of TV viewed by children associated with obesity and violent behavior
- Turning down home hot water thermostat setting lowers rates of tap water burns in children
- Child's home exposure to books associated with development of vocabulary, listening comprehension and reading skills

Background

- US experiencing demographic surge in minority children
 - ◆ Minority children will outnumber non-Hispanic white children by 2030
- Although recent IOM and AHRQ reports called attention to racial/ethnic disparities in healthcare
 - ◆ Studies of disparities in children rare
 - ◆ Prior research has not examined disparities in early childhood home routines and safety

Study Aim

- Use national data set to examine whether racial/ethnic disparities exist in home family routines, safety measures, and reading activities known to affect health and future school success of young children

Methods: Data Source- National Survey of Early Childhood Health (NSECH)

- Telephone survey in 2000 of national random sample of households with children 4-35 months old
- Oversampled households with black and Hispanic children
- Parent or guardian most responsible for child's healthcare interviewed
- 2,068 interviews completed
- Interview completion rate = 79%
- Estimates based on sampling weights generalize to entire US population of children 4-35 months of age

Methods: Study Variables

- Bivariate and multivariate analyses done to examine racial/ethnic disparities in household
 - ◆ Family activities and routines
 - ◆ Safety measures
 - ◆ Reading activities and resources
- Children's race/ethnicity defined as white, black, or Hispanic by parental report
- Due to insufficient sample sizes, subjects from other racial/ethnic groups excluded

Methods: Statistical Analysis

- Data analyzed using STATA to adjust for household and intra-familial clustering of observations
- Multivariate analyses examined racial/ethnic differences after adjusting for
 - ◆ Insurance coverage
 - ◆ Survey language chosen by parent (English vs. Spanish)
 - ◆ Health status (excellent/very good vs. good/fair/poor)
 - ◆ Poverty (using 2000 Federal Poverty Threshold)
 - ◆ Child's age
 - ◆ Maternal age
 - ◆ Weekly hours child spends in childcare
 - ◆ Number of adults in household
 - ◆ Maternal education

Results: Characteristics of 4-35 Month-Old US Children in 2000 (NSECH)

Characteristic	White (N = 718)	Black (N = 477)	Hispanic (N = 817)	<i>P</i>
Mean age (mo)	19.5	19.5	18.7	0.22
Male sex (%)	53	48	51	0.34
Mean # of adults in household	2.1	2.0	2.4	<.001
Mean maternal age (yrs)	30.0	26.8	27.0	<.001
Mother not high school grad (%)	11	26	49	<.001
Mother married (%)	81	32	58	<.001
Family income at/below poverty level (%)	13	49	48	<.001
Uninsured (%)	9	18	31	<.001
Private insurance (%)	72	32	29	
Public insurance (%)	19	50	40	
Child's health excellent/very good (%)	90	79	72	<.001

Early Childhood Disparities in Family Activities and Routines

Family Activity/Routine	White (N = 718)	Black (N = 477)	Hispanic (N = 817)	<i>P</i>
Child's meals at same time daily	80%	65%	70%	<.001
Family eats lunch or dinner together less than daily	42%	50%	43%	<.001
Parent plays music or sings to child daily	76%	84%	65%	<.001
Parent takes child on outings daily	39%	44%	26%	<.001
Mean daily hours child watches TV	1.6	2.4*	1.6	.06
Child goes to bed at same time daily	76%	65%	69%	<.001
Parent would like to spend more time with child	20%	29%	29%	.001

* $P < .05$ for blacks vs. whites and blacks vs. Hispanics

POLLING QUESTIONS

Two polling questions will follow; your participation in answering them is greatly appreciated!

- **Question 1**: What percent of parents in each of the 3 major racial/ethnic groups reads daily to their young children?
 - ◆ Whites: 100% vs. 61% vs. 46% vs. 29% vs. 0%
 - ◆ Blacks: 100% vs. 61% vs. 46% vs. 29% vs. 0%
 - ◆ Hispanics: 100% vs. 61% vs. 46% vs. 29% vs. 0%

POLLING QUESTIONS

- **Question 2**: What is the average number of children's books present in the household for each of the 3 major racial/ethnic groups?
 - ◆ Whites: 100 vs. 83 vs. 41 vs. 33 vs. 9
 - ◆ Blacks: 100 vs. 83 vs. 41 vs. 33 vs. 9
 - ◆ Hispanics: 100 vs. 83 vs. 41 vs. 33 vs. 9

Disparities in Home Safety Measures and Reading Activities/Resources

Safety Measure or Reading Activity/Resource	White (N = 718)	Black (N = 477)	Hispanic (N = 817)	<i>P</i>
Stair gate installed	82%	62%	67%	<.001
Safety latches/locks on cabinets	85%	73%	78%	<.001
Padded hard/sharp surfaces	46%	58%	58%	<.001
Put stopper or plugs in electrical outlets	95%	91%	91%	.01
Turned down hot water thermostat setting	56%	45%	60%	.02
Parent reads to child				<.001
Daily	61%	46%	29%	
Less than daily	36%	49%	56%	
Never	3%	5%	15%	
Mean # of children's books in home	83	41	33	<.001

Multivariate Analyses: Disparities in Family Activities/Routines In Young US Children

Measure	Odds Ratio (95% CI)*†	
	Black	Hispanic
Child's meals not at same time daily	1.8 (1.2, 2.7)	0.8 (0.5, 1.3)
Family eats lunch or dinner together less than daily	1.9 (1.3, 2.6)	1.2 (0.8, 1.7)
Family never eats lunch or dinner together	4.4 (1.9, 10.1)	3.4 (1.3, 8.9)
Mean additional daily hours child watches TV (vs. white children)	0.7 (0.3, 1.1)	0.1 (-0.3, 0.5)

*Reference group: white children

†Adjusted for insurance coverage, survey language, child's health status, poverty, child's age, maternal age, weekly hours child spends in childcare, number of adults in household, and maternal education

Multivariate Analyses: Disparities in Home Safety & Reading Activities/Resources: Young US Children

Measure	Odds Ratio (95% CI)*†	
	Black	Hispanic
Didn't put up stair gates	2.3 (1.6, 3.5)	1.8 (1.2, 2.6)
Didn't install cabinet safety latches/locks	1.8 (1.2, 2.8)	1.2 (0.8, 1.8)
Didn't turn down hot water thermostat setting	1.5 (1.03, 2.1)	1.2 (0.8, 1.7)
Parent reads to child less than daily	1.6 (1.1, 2.3)	1.8 (1.2, 2.5)
Mean number of children's books in home (vs. white children)	-30 (-21, -40)	-20 (-8, -32)

*Reference group: white children

†Adjusted for insurance coverage, survey language, child's health status, poverty, child's age, maternal age, weekly hours child spends in childcare, number of adults in household, and maternal education

Multivariate Analyses: Parent Survey Language and Home Disparities for Young US Children

Measure	<u>Odds Ratio (95% CI)</u> Parent Survey in Spanish*†
Child's meals not at same time daily	2.0 (1.2, 3.3)
Parent takes child on outings less than daily	2.5 (1.6, 3.9)
Padded hard/sharp surfaces	2.0 (1.2, 3.2)
Didn't put stopper or plugs in electrical outlets	2.6 (1.2, 6.0)
Parent reads to child less than every day	3.6 (2.2, 5.9)
Parent never reads to child	3.7 (1.8, 7.5)
Mean number of children's books in home	-39 (-25, -53)

*Reference group: parent completed survey in English

†Adjusted for insurance coverage, race/ethnicity, child's health status, poverty, child's age, maternal age, weekly hours child spends in childcare, number of adults in household, and maternal education

Conclusions

Young minority children experience multiple disparities in home family routines, safety, and reading activities and resources known to impact health and school success

- Black children twice as likely to not have meals at same time daily and to eat lunch or dinner together with their family less than daily
- Minority children 3-4 times more likely to never eat lunch or dinner together with their family
- Black children watch average of 40 min. more of TV daily
- Minority parents twice as likely to not put up stair gates
- Black parents more likely to not install cabinet safety locks and to not lower hot water thermostat settings

Conclusions

- Minority parents twice as likely to not read to their child daily
- Black families averaged 30 fewer children's books at home and Hispanic families 20 fewer than white children
- Multiple disparities also noted for children of parents completing surveys in Spanish including higher odds of
 - ◆ Not having meals at same time daily
 - ◆ Not having stoppers/plugs in electrical outlets
 - ◆ Being read to less than daily
 - ◆ Never being read to
 - ◆ Fewer children's books at home

Implications

- Disparities in home environment could contribute to disparities in older minority children and minority adults, including
 - ◆ School dropout
 - ◆ Drug abuse
 - ◆ Obesity
 - ◆ Violence
 - ◆ Unintentional injury
 - ◆ Low educational attainment and poverty

Implications

- Parents, community and state leaders, and pediatric healthcare providers can work together to implement a few simple measures that can be important steps in reducing these disparities
 - ◆ Children more frequently eating meals together with their family
 - ◆ Children watching fewer hours of television
 - ◆ Parents ensuring home safety measures in place
 - ◆ Parents reading to children daily
 - ◆ Ensuring households have a variety of children's books