

Does Disadvantage Start at Home?

Racial and Ethnic Disparities in Health-Related Early Childhood Home Routines and Safety Practices

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Background: Little is known about whether racial/ethnic differences exist in household family activities, safety practices, and educational opportunities known to impact young children's healthy development and school success.

Objective: To examine whether racial/ethnic disparities exist in early childhood home routines, safety measures, and educational practices/resources.

Methods: The 2000 National Survey of Early Childhood Health is a telephone survey of a nationwide sample of parents of 2608 children aged 4 to 35 months. Differences in family activities, safety measures, and educational practices/resources were examined for white, black, and Hispanic children.

Results: Minority children are less likely than white children to have consistent daily mealtimes and bedtimes, and more frequently never eat lunch or dinner with their family. Minority parents are less likely to install stair gates or cabinet safety locks and to turn down hot water settings. Minority parents less often read daily to their child, Hispanic parents more often never read to their child, and mi-

nority households average fewer children's books. Black children average more hours watching television daily. Disparities persisting in multivariate analyses included: minority children having increased odds of never eating lunch or dinner with their family, black children not having regular mealtimes (odds ratio, 1.8; 95% confidence interval, 1.2-2.7) and watching 1 more hour of television daily, black parents not installing cabinet locks, minority parents having twice the odds of not installing stair gates and not reading to their child daily, and minority homes having fewer children's books (black homes, -30; and Hispanic homes, -20). Children whose parents completed surveys in Spanish also experienced several disparities.

Conclusions: Young minority children experience multiple disparities in home routines, safety measures, and educational practices/resources that have the potential to impede their healthy development and future school success. Such disparities might be reduced or eliminated through targeted education and intervention by pediatric providers.

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THE HOME ENVIRONMENT that parents create for children, including family activities and routines, measures taken to prevent unintentional injuries, and reading activities and resources, can have a major impact on children's health, development, personal safety, and future school success. For example, children who have dinner less frequently with their families are at greater risk for poorer academic performance, substance abuse, using alcohol, smoking cigarettes, eating fewer fruits and vegetables, consuming more soda and saturated fat, and experiencing more stress.^{1,2} The number of hours of television (TV) viewed by children is associated with obesity^{3,4} and violent behavior.^{5,6} Turning down hot water thermostat

settings in households is associated with lower rates of tap water burns in children.^{7,8} The age of onset of home reading routines is an important predictor of children's oral language skills,⁹ and children's exposure to books at home is directly associated with the development of vocabulary, listening comprehension skills, and reading skills.¹⁰

Recent reports by the Institute of Medicine¹¹ and the US Department of Health and Human Services¹² called attention to racial/ethnic disparities in health and health care, but studies of such disparities in children are rare, and even less is known about racial/ethnic disparities in younger children. We analyzed a nationally representative sample of US households to examine whether racial/ethnic disparities exist in home family activities and

routines, safety measures, and reading activities and resources known to affect the health, development, safety, and future school success of young children.

METHODS

DATA SOURCE

The National Survey of Early Childhood Health (NSECH) was designed to examine preventive pediatric care for infants and toddlers and how families promote children's health and development in the home.¹³ The NSECH was a telephone survey in 2000 of a national random digit-dialed sample of households with 4- to 35-month-old children, with oversampling of non-Hispanic black and Hispanic children. A detailed description of the NSECH methodology is presented elsewhere.¹⁴ In this study, we focused on racial/ethnic differences in 2 of 7 NSECH domains: demographics and household information, and family interactions and home safety. A total of 2068 parent interviews are included in the NSECH data set. The interview completion rate was 79.2%; the Council of American Survey Research Organizations response rate (accounting for interview completion and households with potentially eligible children that were not reached) was 65.6%. Estimates based on the sampling weights generalize to the entire US population of children 4 to 35 months old.¹⁴

STUDY VARIABLES

Children's race/ethnicity was defined by parental report as white, black, or Hispanic. "Black" and "Hispanic" are used herein, as these were the terms used in NSECH questions. Because of insufficient sample sizes, children of other racial/ethnic backgrounds were excluded. Bivariate associations between the child's race/ethnicity and the following sociodemographic characteristics were examined: child age and sex, maternal age, number of children and adults in the household, maternal educational attainment, maternal marital and employment status, annual combined household income, number of weekly hours the child spends in child care, health insurance coverage, and the child's health status by parental report. Health insurance coverage was categorized as private, public, or uninsured, with uninsured defined as no health insurance for at least part of the past 12 months. The mother's highest level of education completed was categorized as less than high school, high school, and more than high school.

Bivariate associations between the child's race/ethnicity and the following parent-reported household activities were examined: selected weekly family activities and routines, home safety measures taken by parents, and home reading activities and resources. Responses of "don't know" or "refused to answer" were coded as missing for all study variables.

STATISTICAL ANALYSIS

All data coding, national estimates, and statistical analyses were done using Stata.¹⁵ Racial/ethnic differences in bivariate analyses are presented as percentages and means, with the Pearson χ^2 test and the *t* statistic used to test for statistical significance. Multiple logistic regression was performed to examine racial/ethnic disparities in dichotomous outcomes, after adjustment for health insurance coverage, health status, the child's age, maternal age, number of weekly hours the child spends in child care, number of adults in the household, poverty (total annual family income dichotomized as "poor" [$< \$17500$] and "non-poor" [$\geq \17500]) using the 2000 federal poverty threshold¹⁶

for a family of 4), parental survey language (English vs Spanish), and maternal educational attainment. Multiple linear regression was used to examine racial/ethnic disparities in continuous outcomes, after adjustment for the same 9 covariates. Similar multivariate analyses were used to examine adjusted odds or mean differences for children of parents completing surveys in Spanish vs English, except race/ethnicity replaced survey language as the ninth covariate.

RESULTS

DESCRIPTION OF THE STUDY SAMPLE

There were no differences among white, black, and Hispanic children in mean age or sex (**Table 1**). Minority mothers were significantly younger than white mothers. Minority households averaged slightly more children, and Hispanic households had a slightly higher mean number of adults. Compared with white mothers, Hispanic mothers were more than 4 times and black mothers more than 2 times as likely to not be high school graduates. Black mothers were least likely to be married and most likely to be employed. Minority children were more likely to be poor, uninsured, and not in excellent or very good health; black children spent more weekly hours in child care.

FAMILY ACTIVITIES AND ROUTINES

Minority children were less likely than white children to have meals at the same time daily, and more likely to never eat lunch or dinner with their family (**Table 2**). Black children were more likely than other children to not eat lunch or dinner with their family daily. Minority children were slightly more likely than white children to eat breakfast with their family daily.

Black parents were most likely and Hispanic parents least likely to play music or sing with their child daily, and Hispanic parents were less likely to take children on daily outings. Black children averaged significantly more hours per day watching TV than white children (mean difference, 0.82 hours; 95% confidence interval [CI], 0.50-1.14 hours). Minority children were less likely to go to bed at the same time daily, and Hispanic children were less likely to have a consistent daily nap time. Minority parents more frequently reported they would like to spend a lot more time with their child.

HOME SAFETY MEASURES TAKEN BY PARENTS

Minority parents were substantially less likely to put up stair gates at home compared with white parents, with only about two thirds of minority homes vs 82% of white homes containing stair gates (Table 2). Minority parents also were less likely to install safety latches or locks on cabinets, and were slightly less likely to put stoppers or plugs into electrical outlets. Black parents were substantially more likely than white and Hispanic parents to have not lowered the hot water thermostat setting.

Table 1. Selected Sociodemographic Characteristics of White, Black, and Hispanic Children 4 to 35 Months Old and Their Parents in 2000 in the United States*

Characteristic	White Children (n = 718)	Black Children (n = 477)	Hispanic Children (n = 817)	P Value
Age, mo†	19.5 (18.7 to 20.3)	19.5 (18.4 to 20.7)	18.7 (17.9 to 19.5)	.22
Male sex	53.0 (48.6 to 57.4)	48.0 (42.3 to 53.8)	51.2 (46.8 to 55.5)	.34
Mother's age, y†	30.0 (29.5 to 30.6)	26.8 (26.0 to 27.5)	27.0 (26.5 to 27.5)	<.001
No. of children in the household†	2.09 (2.01 to 2.17)	2.32 (2.19 to 2.45)	2.34 (2.24 to 2.44)	<.001
No. of adults in the household†	2.06 (2.02 to 2.11)	1.95 (1.84 to 2.05)	2.40 (2.30 to 2.50)	<.001
Mother's highest level of education‡				
<12th grade	10.7 (8.0 to 14.3)	25.7 (20.1 to 32.3)	48.6 (44.2 to 53.1)	<.001
High school graduate	33.9 (29.7 to 38.3)	40.0 (34.5 to 45.7)	29.9 (26.1 to 33.9)	
≥1 y of college	55.4 (50.9 to 59.8)	34.4 (29.4 to 39.6)	21.5 (18.6 to 24.7)	
Mother married	81.3 (77.3 to 84.7)	32.2 (27.2 to 37.6)	57.7 (53.2 to 62.1)	<.001
Mother not employed	44.8 (40.5 to 49.2)	39.4 (33.6 to 45.4)	53.1 (48.7 to 57.4)	.005
Annual combined family income, \$‡				
0-7500	3.6 (2.1 to 6.1)	15.9 (11.6 to 21.5)	12.7 (9.8 to 16.4)	<.001
7501-17 500	9.5 (6.9 to 12.9)	32.6 (26.7 to 39.1)	34.6 (30.1 to 39.4)	
17 501-35 000	27.3 (23.4 to 31.6)	27.1 (22.1 to 32.7)	33.7 (29.5 to 38.3)	
35 001-60 000	28.7 (24.8 to 32.9)	14.4 (11.1 to 18.5)	12.2 (9.8 to 15.1)	
60 001-75 000	10.8 (8.2 to 14.3)	3.8 (2.3 to 6.0)	3.5 (2.4 to 5.2)	
>75 000	20.1 (16.9 to 23.7)	6.3 (4.4 to 8.8)	3.3 (2.3 to 4.7)	
No. of weekly hours child spends in child care‡				
0	38.2 (34.0 to 42.6)	31.6 (26.5 to 37.1)	48.5 (44.1 to 52.9)	<.001
1-20	37.2 (33.1 to 41.5)	33.6 (28.4 to 39.3)	28.3 (24.5 to 32.4)	
21-40	18.5 (15.6 to 21.8)	28.2 (23.2 to 33.8)	17.0 (14.0 to 20.5)	
>40	6.1 (4.4 to 8.6)	6.7 (4.6 to 9.5)	6.2 (4.1 to 9.3)	
Health insurance coverage				
None§	9.3 (7.0 to 12.4)	18.1 (14.1 to 22.9)	31.4 (27.2 to 35.9)	<.001
Private	71.6 (67.2 to 75.6)	32.2 (27.5 to 37.4)	28.6 (24.9 to 32.6)	
Public	19.1 (15.6 to 23.1)	49.7 (43.8 to 55.7)	40.0 (35.7 to 44.4)	
Child is in excellent or very good health	89.7 (86.5 to 92.1)	79.0 (73.5 to 83.7)	71.7 (67.4 to 75.5)	<.001

*Data are given as percentage (95% confidence interval) of each group unless otherwise indicated. Data are from the 2000 National Survey on Early Childhood Health. Numbers of children are the numbers for whom responses were available. Percentages are weighted to represent US children 4 to 35 months old.

†Data are given as mean (95% confidence interval).

‡Percentages may not total 100 because of rounding.

§Uninsured at any time in the past 12 months.

||By parental report.

HOME READING ACTIVITIES AND RESOURCES

Whereas almost two thirds of white children were read to daily by their parents, fewer than half of black children and one third of Hispanic children were read to daily by their parents (Table 2). Hispanic parents were substantially more likely than either black or white parents to never read to their children. Dramatic racial/ethnic disparities were observed in the mean number of children's books in the home, with white families averaging 83 children's books per household, compared with an average of 41 books per household for black children and 33 books per household for Hispanic children.

MULTIVARIATE ANALYSES

Multivariate adjustment revealed black children had almost double the odds of not having their meals at the same time daily and of eating lunch or dinner with their family less than daily (Table 3). Black children had 4 times the odds and Hispanic children 3 times the odds of never eating lunch or dinner with their family. Black children averaged almost an hour more of daily TV watch-

ing than white children. Black parents were more likely to play music or sing with their child daily.

Minority parents were approximately twice as likely as white parents to not put up stair gates in the home. Black parents were also about twice as likely as white parents to not install cabinet safety locks and to not turn down the hot water thermostat setting.

Hispanic and black parents were almost twice as likely as white parents to not read to their child daily. Black and Hispanic families had a significantly lower adjusted mean number of children's books in the household than white families, with black families averaging 30 fewer children's books per household and Hispanic families averaging 20 fewer children's books per household.

Several disparities were noted for children of parents completing surveys in Spanish (compared to children with parents completing English surveys) (Table 4). These children were about twice as likely to not have meals at the same time daily and to have parents who play music or sing with their child less than every day, and almost 3 times as likely to not be taken on daily outings. Parents completing Spanish surveys had about triple the odds of not putting a stopper or plugs in electrical outlets. Parents completing Spanish surveys were more than 3 times

Table 2. Selected Household Family Activities and Routines, Safety Practices, and Reading Practices and Resources for White, Black, and Hispanic Children 4 to 35 Months Old in the United States in 2000*

Feature	White Children (n = 718)	Black Children (n = 477)	Hispanic Children (n = 817)	P Value
Family activities and routines				
Child's meals at same time each day	79.0 (75.0 to 82.4)	65.0 (58.9 to 70.6)	70.8 (66.5 to 74.8)	<.001
Family eats breakfast together every day	22.0 (18.6 to 25.9)	29.8 (24.4 to 35.7)	29.8 (25.7 to 34.3)	.006
Family eats lunch or dinner together†				
Every day	58.0 (53.6 to 62.2)	50.4 (44.6 to 56.3)	57.9 (53.4 to 62.3)	<.001
Less than every day	40.4 (36.2 to 44.7)	41.9 (36.3 to 47.8)	37.3 (33.0 to 41.7)	
Never	1.7 (1.0 to 2.9)	7.7 (5.1 to 11.4)	4.9 (3.0 to 7.8)	
Parent plays music or sings with child every day	75.9 (71.8 to 79.5)	83.9 (79.7 to 87.4)	64.9 (60.5 to 69.1)	<.001
Parent takes child on outings every day‡	38.9 (34.8 to 43.3)	44.0 (38.3 to 49.9)	26.1 (22.6 to 29.9)	<.001
Child watches television, h/d§	1.6 (1.4 to 1.7)	2.4 (2.1 to 2.7)	1.6 (1.5 to 1.8)	.06
Child goes to bed at the same time each day	76.3 (72.2 to 80.1)	65.2 (59.3 to 70.7)	68.8 (64.7 to 72.7)	<.001
Child naps at the same time each day	67.0 (62.7 to 71.1)	69.9 (64.1 to 75.1)	58.5 (54.1 to 62.9)	.01
Parent would like to spend a lot more time with child	20.2 (16.9 to 24.0)	29.4 (24.1 to 5.2)	29.0 (25.2 to 33.0)	.001
Home safety measures taken by parents				
Put up stair gates	82.3 (78.7 to 85.4)	62.3 (56.3 to 68.0)	67.0 (62.8 to 70.9)	<.001
Installed safety latches or locks on cabinets	84.8 (81.5 to 87.6)	72.6 (66.8 to 77.7)	78.3 (74.4 to 81.8)	<.001
Put stopper or plugs in electrical outlets	95.0 (92.5 to 96.7)	90.5 (87.0 to 93.2)	90.7 (87.3 to 93.2)	.01
Turned down hot water thermostat setting	56.1 (51.7 to 60.4)	45.4 (39.4 to 51.5)	60.3 (55.7 to 64.8)	.02
Home reading activities and resources				
Parent reads to child				
Every day	61.3 (57.0 to 65.5)	46.2 (40.4 to 52.1)	28.8 (25.2 to 32.7)	<.001
Less than every day	35.8 (31.1 to 40.1)	48.6 (42.7 to 54.4)	56.0 (51.7 to 60.3)	
Never	2.9 (1.8 to 4.6)	5.2 (3.5 to 7.8)	15.2 (12.2 to 18.7)	
No. of children's books in home§	83.0 (76.3 to 89.6)	40.7 (35.8 to 45.5)	32.8 (28.6 to 37.0)	<.001

*Data are given as percentage (95% confidence interval) of each group unless otherwise indicated. Data are from the 2000 National Survey on Early Childhood Health. Numbers of children are the numbers for whom responses were available. Percentages are weighted to represent US children 4 to 35 months old. Different questions were asked depending on the child's age (0-9, 10-18, and 19-35 months), so that only age-appropriate questions relevant to each family were asked.

†Percentages may not total 100 because of rounding.

‡Such as to the park, the grocery store, a church, or a playground.

§Data are given as mean (95% confidence interval).

Table 3. Adjusted Odds Ratios and Mean Differences for Disparities in Selected Household Family Activities and Routines, Safety Practices, and Reading Practices and Resources for Black and Hispanic Children 4 to 35 Months Old in the United States in 2000*

Measure	Odds Ratio or Mean Difference (95% Confidence Interval)	
	Black Children	Hispanic Children
Family activities and routines		
Child's meals not at the same time each day	1.79 (1.20 to 2.68)	0.81 (0.52 to 1.25)
Family eats lunch or dinner together less than every day	1.85 (1.31 to 2.61)	1.20 (0.84 to 1.72)
Family never eats lunch or dinner together	4.37 (1.88 to 10.12)	3.36 (1.28 to 8.87)
Parent plays music or sings with child every day	1.64 (1.05 to 2.54)	0.90 (0.59 to 1.37)
Additional time child watches television (vs white children), h/d	0.67 (0.28 to 1.06)	0.09 (-0.29 to 0.46)
Home safety measures taken by parents		
Did not put up stair gates	2.34 (1.57 to 3.49)	1.75 (1.17 to 2.61)
Did not install safety latches or locks on cabinets	1.82 (1.20 to 2.76)	1.19 (0.76 to 1.84)
Did not turn down hot water thermostat setting	1.45 (1.03 to 2.06)	1.20 (0.84 to 1.70)
Home reading activities and resources		
Parent reads to child less than every day	1.63 (1.14 to 2.34)	1.78 (1.24 to 2.54)
No. of children's books in the home (vs white children)	-30.10 (-39.70 to -20.60)	-20.20 (-32.10 to -8.30)

*Data are from the 2000 National Survey on Early Childhood Health, and are expressed as adjusted data for each measure compared with white children. All odds ratios are adjusted for health insurance, survey language (English vs Spanish), the child's health status (by parental report), poverty, the child's age, maternal age, weekly hours the child spends in child care, number of adults living in the household, and maternal educational attainment.

more likely to read to their child less than daily, and almost 4 times more likely to never read to their child. Households of parents completing Spanish surveys averaged 39 fewer children's books than households of parents completing English surveys.

Inclusion of survey language in multivariate models also had substantial effects for Hispanic children, both in terms of the number and magnitude of disparities. In multivariate models (not shown) adjusting for all 9 co-variables except survey language, Hispanic parents were

Table 4. Adjusted Odds Ratios and Mean Differences for Selected Household Family Activities and Routines, Safety Practices, and Reading Practices and Resources for Children 4 to 35 Months Old in the United States With Spanish-Speaking Parents in 2000*

Measure	Parent Completed Survey in Spanish, Odds Ratio or Mean Difference (95% Confidence Interval)
Family activities and routines	
Child's meals not at the same time each day	1.99 (1.21 to 3.27)
Parent plays music or sings with child less than every day	2.51 (1.55 to 4.07)
Parent takes child on outings less than every day†	2.81 (1.73 to 4.46)
Home safety measures taken by parents	
Did not put stopper or plugs in electrical outlets	2.63 (1.15 to 6.00)
Home reading activities and resources	
Parent reads to child less than every day	3.57 (2.18 to 5.85)
Parent never reads to child	3.65 (1.79 to 7.47)
Mean number of children's books in the home (vs children whose parents completed surveys in English)	-39.0 (-25.3 to -52.7)

*Data are from the 2000 National Survey on Early Childhood Health. Of the 399 children whose parents completed surveys in Spanish, 395 were Hispanic, 2 were white, and 2 were black. Odds ratios are expressed as the adjusted odds of each measure for children with parents completing the survey in Spanish compared with children with parents completing the survey in English. All odds ratios are adjusted for health insurance, race/ethnicity, the child's health status (by parental report), poverty, the child's age, maternal age, weekly hours the child spends in child care, number of adults living in the household, and maternal educational attainment.

†Such as to the park, the grocery store, a church, or a playground.

significantly more likely than white parents to never read to their child, to play music or sing with their child less than daily, and to take their child on outings. But after adjusting for survey language, these disparities were eliminated. Adjusting for survey language also substantially reduced the magnitude of disparities for Hispanic parents reading to their child less than every day, from an odds ratio of 2.75 (95% CI, 1.95-3.87) to 1.78 (95% CI, 1.24-2.54), and for the adjusted mean number of children's books in the household, from -35.4 (95% CI, -22.0 to -48.8) to -20.2 (95% CI, -8.3 to -32.1). For never eating lunch or dinner with the family, however, survey language actually increased the odds ratio, and survey language adjustment had little effect on the significantly increased odds of not putting up stair gates in the household.

COMMENT

To our knowledge, this is the first study to report racial/ethnic disparities in early childhood home routines and safety practices. Compared with white children, black and Hispanic children had substantially greater odds of never eating lunch or dinner with their family. Children who have dinner with their family 0 to 2 times weekly (compared with children who have dinner with their family 5-7 times weekly) have been shown to have approximately double the risk for substance abuse and high stress; to be significantly more likely to have tried marijuana, alcoholic beverages, and cigarettes; and to be half as likely to receive A's in school.¹ Children who never or only occasionally eat dinner with their family are significantly less likely to eat 5 daily servings of fruits and vegetables; have substantially lower intakes of fiber, calcium, folate, and vitamins B₆, B₁₂, C, and E; consume greater amounts of saturated fat and *trans*-fat; have a higher glycemic load; and are significantly more likely to drink soda and eat fried foods.² Encouraging minority parents

to have dinner daily with their children thus might have the potential to influence or perhaps even alter the causative chain of events that can lead to obesity, poor school performance, and use of illicit drugs, alcohol, and tobacco. Such an intervention is relatively easy and simple for families to adopt and for pediatricians to recommend during well-child care visits. Further study of the effectiveness of this intervention is needed, particularly given the potential to specifically address such national racial/ethnic disparities as black girls and Hispanic boys having the highest overweight prevalence,^{17,18} Hispanic and black children having the highest high school dropout rates (28% and 17%, respectively, vs 7% among white children),¹⁹ Hispanic children having the highest prevalence of current and lifetime cocaine use among adolescents,²⁰ and black adults having the highest prevalence of illicit drug use in the prior year.²¹

Young black children were found to watch almost an hour more of TV daily than young white children, consistent with national data on older children.⁴ Several studies indicate a dose-response relationship between overweight and hours of TV viewed by children.^{3,4,22,23} Television viewing hours are associated with children's fat and calorie (energy) intake^{24,25} and are inversely associated with intake of fruit and vegetables.²⁶ Studies also suggest that the number of daily hours of TV viewed is associated with violent behavior in children.^{5,6,27-30} Encouraging black parents to reduce the number of hours of TV watched by their young children thus might have the potential to influence or alter pathways that lead to obesity, poor nutrition, and violent behavior. Setting time limits on young children's TV viewing is relatively easy and simple for parents, and is an intervention that can be recommended by pediatric providers with little time investment during well-child care visits. A recent randomized trial also showed that a preschool-based intervention can reduce TV viewing in young children.³¹ More research is needed on the effectiveness of limiting mi-

minority children's TV viewing hours on selected health outcomes and the effectiveness of practice-based interventions in reducing children's TV viewing.

Unintentional injuries continue to be the leading cause of death in US children, accounting for 11 196 deaths and 44% of childhood mortality in 2001.³² In this study, several racial/ethnic disparities were noted in home injury prevention practices, including a lower likelihood of minority parents putting up stair gates, black parents installing cabinet safety latches and turning down hot water thermostat settings, and Spanish-speaking parents putting stoppers or plugs in electrical outlets. These findings suggest that minority children and those with parents completing Spanish surveys may be at higher risk for falls, poisonings, burns, and electrical injuries, and might benefit from injury prevention counseling by health care providers. The American Academy of Pediatrics recommends that physicians caring for infants and preschool-aged children should advise parents about using stair gates to prevent falls, using cabinet safety latches to prevent poisoning, and lowering hot water thermostat settings to prevent burns.^{33,34} Primary care-based injury prevention counseling is associated with increased knowledge and improved behaviors among parents and decreased injuries among children.³⁵ Group well-child care classes,³⁶ distribution of selected free safety devices,³⁷ community-wide prevention campaigns,^{8,38} and state legislation⁷ have been shown to be effective in increasing home safety prevention practices and reducing unintentional injuries, and coupling these measures with primary care-based injury prevention counseling by pediatric providers may prove to be the most effective mechanisms for reducing or eliminating disparities in home injury prevention practices among minority children and those in Spanish-speaking households.

Minority parents have double the odds and parents completing Spanish surveys triple the odds of not reading to their children every day. Minority children and those with parents completing Spanish surveys also had substantially fewer children's books in the household, and children with parents completing Spanish surveys had quadruple the odds of never being read to by their parents. Evidence indicates that these disparities in home reading practices and resources place minority children and those with Spanish-speaking parents at a distinct disadvantage in reading, language skills, and school achievement. The age of onset of home reading is strongly associated with a child's oral language skills.⁹ Children's early exposure to books is associated with vocabulary development, listening comprehension skills, and reading achievement in third grade.¹⁰ Children who lag behind in reading skills get less reading practice, often encounter reading materials too advanced for their skills, can acquire negative attitudes about reading, may have impeded learning in other academic areas that increasingly depend on reading, and are at risk for qualifying for special education services.³⁹ Childhood reading skills were strongly associated with attainment of a high school diploma or graduate equivalency diploma in an intergenerational longitudinal study following children over several decades.⁴⁰ Educational attainment, in turn, is one of the most important determinants of income, poverty,

and unemployment,^{41,42} and is associated with a nation's economic growth.⁴³ Multiple studies document the association of poverty with poor mental and physical health⁴⁴ and mortality.^{45,46} Thus, one can hypothesize that, especially for minority children, greater exposure to books and being read to more often by parents potentially improve children's vocabulary and reading and language skills in the short term, resulting in possible long-term effects that might include better school performance, higher educational attainment, greater earning potential, a lower risk of poverty, and perhaps even lower risks of poverty-associated adverse health outcomes and mortality.

An effective intervention is available to pediatric providers that potentially can reduce or eliminate disparities in home reading practices and resources for minority children and those with Spanish-speaking parents. Reach Out and Read, a program promoting early childhood literacy in the primary care setting, consists of 3 components: (1) clinicians provide anticipatory guidance to parents during well-child care visits about the importance of reading aloud to children, (2) clinicians give children a new book at each well-child care visit, and (3) volunteers in clinic waiting rooms read aloud to children and model techniques for parents.⁴⁷ Families exposed to Reach Out and Read and other similar literacy programs read significantly more often to their children, are less likely to never read to their children, and have significantly more children's books at home.⁴⁸⁻⁵⁰ Studies also document significant increases in the frequency of children being read to by parents and the number of children's books at home among Hispanic and limited English-proficient families exposed to Reach Out and Read and other clinic-based literacy programs.⁵¹⁻⁵³

Certain limitations of this study should be noted. The NSECH response rate was 65.6%, and data are not available on nonrespondents, so it is possible that the findings are subject to response bias, although the NSECH response rate is consistent with other nationally representative health surveys. Sample sizes were insufficient to permit analyses of study outcomes for Asian/Pacific Islander, Native American, and Hispanic subgroups. The survey was available only in English and Spanish, so it is not possible to examine outcomes for parents with limited English proficiency from other major language groups. Although NSECH recorded whether parents chose to complete surveys in English or Spanish, data were not collected on parents' English proficiency, a variable known to be associated with children's health and use of services.⁵⁴

Multiple disparities were noted for children of parents completing Spanish surveys. In particular, compared with parents completing English surveys, parents completing Spanish surveys had triple the odds of not putting stoppers or plugs into electrical outlets and of reading to children less than daily, quadruple the odds of never reading to children, and averaged 39 fewer children's books per household. These findings indicate that families with parents who prefer to speak Spanish and/or are recent immigrants may benefit from targeted anticipatory guidance during well-child care visits on the hazards to young children of unprotected electrical outlets

and on the benefits of reading daily to children. In addition, these parents might benefit from receiving free electrical outlet covers during pediatric visits, an intervention shown to increase home use of outlet covers,³⁷ and several studies document that Spanish-speaking and immigrant families who participate in primary care-based literacy programs read to their children more often and have more children's books in the household.^{49,51-53} Our study findings regarding children of parents completing Spanish surveys also indicate the importance of considering language in pediatric health service research. Different disparities (such as not putting stoppers or plugs in electrical outlets) and disparities of greater magnitude (such as parents reading to children less than daily) were found for children of parents completing Spanish surveys compared with analyses by race/ethnicity, and adjusting for parental survey language eliminated several disparities for Hispanic children.

This study documents multiple disparities for young minority children in the United States in home routines, safety measures, and reading routines and resources known to affect children's health, development, personal safety, and future school success. It is possible that these disparities in the home environment of young children could contribute to the development of multiple disparities in older minority children and in minority adults, including a higher prevalence of school dropout, substance abuse, obesity, poor nutrition, violent behavior, and unintentional injuries, and perhaps even low educational attainment, poverty, and poverty-associated morbidity and mortality. Racial/ethnic disparities in health in later childhood and adulthood are often complex and multifactorial. Our study findings, however, suggest that parents and pediatric providers can work together to implement a few simple measures—children eating meals more frequently with their families and watching fewer hours of TV, parents ensuring home safety mechanisms are in place, parents reading to children daily, and parents ensuring households have a variety of children's books—that can be important steps in reducing disparities in home routines and resources known to impact young children's healthy development and school success, and that might decrease the risk of racial/ethnic disparities later in life.

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