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**RACIAL AND ETHNIC DIFFERENCES IN MOTHERS' PARENTING STRESS:**

**THE ROLE OF STRUCTURAL CONDITIONS AND PARENTING STYLES**

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## ABSTRACT

Using data from the Early Childhood Longitudinal Study, Kindergarten Cohort (N = 9,799), this study examines racial-ethnic disparities in mothers' parenting stress in two developmental stages. In kindergarten, black mothers report more parenting stress than white mothers due to structural disadvantages and, to a lesser degree, authoritarian parenting styles. From kindergarten to third grade, parenting stress increases more for blacks than other mothers, and black mothers' higher stress than other mothers' in third grade remains even after controlling for structural factors and parenting styles. Hispanic mothers, albeit immigrants only, report more parenting stress than white mothers in both years, largely due to structural disadvantages. Asian mothers differ little from white mothers. Unexpectedly, American Indian mothers report less stress regardless of structural disadvantages. Results indicate that racial and ethnic differences in parenting stress are largely due to economic disparities, although black and American Indians show unique race and ethnicity effects.

Researchers on social stress generally argue that racial and ethnic minorities tend to be exposed to greater stress than whites (George and Lynch 2003; Williams and Harris-Reid 1999). Yet, surprisingly little research has examined racial and ethnic disparities in roles strains, or difficulties in major social roles, despite the importance of role strains in social roles as key stressors that influence mental health (Pearlin 1989). In particular, although there are some studies that have investigated racial disparities in job stress (Bartel 1981; Greenhaus, Parasuraman, and Wormley 1990) and marital stress (Broman 1993; Bulanda and Brown 2007), we know very little about racial and ethnic differences in parenting stress. Because parenthood continues to be one of the most important social roles for U.S. adults (Nelson 2010) and parenting stress has negative consequences on the well-being of adults (Avison, Ali, and Walters 2007; Greenfield and Marks 2006) and children (Goldberg et al. 1997; Wakschlag and Keenan 2001), it is important to examine disparities in parenting stress across racial and ethnic groups in order to advance our understanding of racial and ethnic disparities in stress and mental health.

Using data from the Early Childhood Longitudinal Study—Kindergarten Cohort (ECLS-K), this paper explores racial and ethnic differences in mothers' parenting stress in two developmental stages, kindergarten and third grade, among whites, blacks, Hispanics, Asians, and American Indians. We expect that racial and ethnic minority mothers report more parenting stress than white mothers, in part because of structural disadvantages, authoritarian parenting styles, and immigration. In addition, we predict that although parents in all racial and ethnic groups experience increases in parenting stress from kindergarten to third grade, the degree of such increase is greater for racial and ethnic minority mothers than for white mothers. By investigating differential exposure to parenting stress, this study provides new insight for understanding racial and ethnic disparities in social stress and health.

## BACKGROUND

### *Determinants of Parenting Stress: Structural Factors and Parenting Styles*

Though parenting stress has been defined in several ways (Deater-Deckard 2004), a dominant approach is a role strain perspective (Pearlin 1989) that defines parenting stress as a sense of difficulties experienced in the parenting role because the demands associated with the parenting role exceed the resources available to meet those demands (Abidin 1992; Cooper, McLanahan, Meadows, and Brooks-Gunn 2009). Demands of parenting include time-based demands (e.g., time caring for children) and strain-based demands (e.g., interpersonal conflict). Resources of parenting can be material (e.g., money, skills, knowledge), social (e.g., social support), and psychological (e.g., feeling esteemed or meaningful activities). To understand the sources of demands and resources that influence levels of parenting stress, prior research has examined factors in three domains, including parent characteristics, child characteristics, and contexts surrounding parents and children such as marital quality, job conditions, and social support (Abidin 1992; Deater-Deckard 2004). Little research has examined racial and ethnic differences in parenting stress, however.

There are reasons for why we expect variations in parenting stress across racial and ethnic groups. In the United States, race and ethnicity reflects unequal structural positions (Williams and Collins 1995). In addition, it manifests cultural traditions that emphasize different parenting styles (Chao and Kanatsu 2008; Dixon, Brooks-Gunn, and Graber 2008). Structural factors and parenting styles influence the levels of demands and resources of parenting, which may result in observed racial and ethnic disparities in parenting stress. Below, we first discuss how structural factors and parenting styles are related to parenting stress, which will help us predict the association between race and ethnicity and parenting stress.

Structural conditions, such as mother's demographic characteristics, family structure, and socioeconomic status (SES), are related to different levels of parenting stress. Younger mothers typically have fewer resources and thus are more likely to report parenting stress than older mothers (Nomaguchi and Brown 2011; Ross and Van Willigen 1996). Having more children in the household means more daily parenting demands for mothers and thus is related to more parenting stress (McBride et al. 2002; Nomaguchi and Brown 2011). Single mothers are more likely to report higher parenting stress, as they have no partner available to assist with household duties (Avison et al. 2007). Higher SES, such as higher family income, means more resources are available for mothers to deal with parenting demands (McLeod and Nonnemaker 1999) and thus is related to lower parenting stress (Mulsow et al. 2002). Full-time employed mothers tend to report less parenting stress than homemakers (Goldsteen and Ross 1989; Nomaguchi and Brown 2011). The link between education and mother's parenting stress is more complex, however. Although highly educated mothers have more resources that help them reduce daily demands of parenting, they tend to feel more role captivity due to higher expectations of success in their careers (Nomaguchi and Brown 2011).

Different styles of parenting are also related to different levels of demands and resources in the parenting role. Parents with authoritarian parenting styles tend to regard the parent-child relationship to be hierarchical, demand respect and obedience from their children, and attempt to control their children's behavior through coercive methods including directives and physical punishment (Lareau 2003; Nelson 2010). Such parents' attempts to control their children's behavior tend to result in a more frequent parent-child conflict (Dixon et al. 2008), a major source of psychological demands of parenting. In contrast, parents with authoritative parenting styles tend to treat children as equals, allow them to negotiate family rules, and clearly

communicate with them about expectations about how they should behave (Lareau 2003). Such parenting style allows parents to be more confident about their parenting (Ohan, Leung, and Johnston 2000) and maintain a close relationship with their children (Nelson 2010). The sense of competence and a close parent-child relationship are psychological resources that may help parents deal with stressful aspects of parenting. Empirical studies have shown that authoritarian parenting styles are related to higher parenting stress than authoritative styles (Deater-Deckard and Scarr 1996; Nomaguchi and Brown 2011).

### *Racial and Ethnic Differences in Exposure to Parenting Stress*

Turning to specific racial and ethnic minority groups, we now discuss how each group differs in structural positions and parenting styles from whites, and thus experience differential exposure to parenting stress than whites. We focus on four racial and ethnic minority groups, including blacks, Hispanics, Asians, and American Indians.

*Black mothers.* Black mothers exhibit several structural disadvantages that are related to a higher level of parenting stress. Black mothers are more likely than white counterparts to have children at an early age (Mathews and Hamilton 2009), to have more children, and to have more nonmarital births (Hummer and Hamilton 2010; Martinez, Daniels, and Chandra 2012). In addition, black mothers have lower family incomes (Aud, Fox, and KewalRamani 2010) than white mothers, although they are more likely to be employed (U.S. Bureau of Labor Statistics 2011), a factor that is related to less parenting stress. With regard to parenting styles, black mothers are more authoritarian than white mothers. Black mothers are more likely than white mothers to expect obedience and respect from their children, provide more strict rules (Chao and Kanatsu 2008; Dixon et al. 2008; Hill and Tyson 2008; Pinderhughes and Hurley 2008), and use physical discipline (Gershoff et al. 2012; Lansford et al. 2004; Slade and Wissow 2004). All in

all, we expect that black mothers will report more parenting stress than white mothers, because of structural disadvantages and more authoritarian parenting style.

*Hispanic mothers.* Structural and cultural patterns for Hispanics, which reflect characteristics of large subgroups such as Mexicans, Puerto Ricans, and Dominicans, show more disadvantages than those for whites. Hispanic women tend to have children at an earlier age (Mathews and Hamilton 2009), have more children than white women (Raley, Durden and Wildsmith 2004; Martin et al. 2011), and are more likely to have nonmarital births (Hummer and Hamilton 2010; Martinez et al. 2012). They tend to have a lower level of education and lower income (Aud, Fox, and KewalRamani 2010) and are less likely to be employed than white mothers (U.S. Bureau of Labor Statistics 2011). Reflecting a culture that emphasizes interdependence and loyalty to one's family, Hispanic parents tend to provide their children with higher levels of controls and restrictions than white parents (Bulcroft, Carmody, and Bulcroft 1996; Chao and Kanatsu 2008; Dixon et al. 2008). Hispanic mothers are more likely to use physical punishment than white mothers (Gershoff et al. 2012), although some research shows no differences in frequency of the use of spanking between Hispanic and white parents (Slade and Wissow 2004). In sum, we expect that Hispanic mothers will show more parenting stress than white mothers because of structural disadvantages and more authoritarian parenting style.

*Asian American mothers.* Unlike other racial and ethnic minority groups, Asians—dominant subgroups include Chinese, Filipino, and Indian—are generally similar to or more advantaged than whites in structural conditions. Asian women are little different in age at first birth (Mathews and Hamilton 2009) and the number of children (U.S. Census Bureau 2012) than white women and are less likely to have nonmarital births (Hummer and Hamilton 2010). On average, Asians have higher levels of family income than whites (U.S. Census Bureau 2012),

although Asian mothers are less likely to be employed than white mothers (U.S. Bureau of Labor Statistics 2011). In terms of parenting style, Asian American parents are more authoritarian than white parents, emphasizing loyalty toward the elderly, obedience to parents, self-sacrifice to gain the well-being of the family, self-control, and academic achievement (Julian, McKenry, and McKelvey 1994; Shariff 2009). Whether Asian American parents tend to spank their children more than white parents is unclear with inconsistent empirical findings (Gershoff et al. 2012; Julian, McKenry and McKelvey 1994), however. In sum, we expect that Asian American mothers will show more parenting stress than White mothers because of more authoritarian parenting style.

*American Indian Mothers.* American Indian mothers show disadvantages in several ways. They are more likely than white mothers to have children at an earlier age, have more children (Sandefur and Liebler 1997), and be single mothers (Sandefur and Liebler 1997). They tend to experience economic difficulties with a high unemployment rate and lower educational attainments (MacPhee, Fritz, and Miller-Heyl 1996). American Indian culture emphasizes different childrearing values from the mainstream white culture. American Indian parents emphasize respect for elders and conformity rather than autonomy (Parke and Buriel 2002) and place less emphasis on extensive language use (MacPhee et al. 1996). However, they tend to avoid spanking, but rely more on psychological control such as shaming misbehavior (MacPhee et al. 1996; Pettit 1990). In sum, we expect that American Indian mothers will show more parenting stress than white mothers because of structural disadvantages and more authoritarian parenting style.

*Separating Immigration Effects*



Hispanic and Asian populations have a high percentage of foreign-born persons (Motel and Patten 2012; Pew Research Center 2012). Little research has examined the influence of immigration on parenting stress, although some studies show that foreign-born mothers experience more parenting stress than native-born mothers (Raphael et al. 2009). Foreign-born mothers are more likely to have fewer material resources than native-born counterparts, as foreign-born men and women tend to earn less than native-born counterparts with the same levels of education (U.S. Bureau of Labor Statistics 2012). Also, immigrant mothers tend to face unique challenges in parenting such as parent-child conflict due to differences in levels of acculturation between their children and themselves (Leidy, Guerra, and Toro 2010; Zhou 1997). Thus part of observed differences in parenting stress between Hispanic or Asian mothers and white mothers, if any, may be attributed to the higher percentages of immigrants within these groups.

#### *Variations by Developmental Stage*

Prior research has shown that levels of parenting stress vary by the child developmental stage (Fagot and Kavanagh 1993). Most research has focused on early childhood and less is known about how parenting stress changes as children are grown far into school age. Some research suggests that parenting stress may increase as children get older. As children's social world expands, parents' perceived quality of the relationship with their children tends to decline from preschool to school-age (Galinsky 1987; Nomaguchi 2012), in part because of the increase in peer influences that mothers tend to see as negative (Edin and Kefalas 2005). Thus we expect that parenting stress increases from kindergarten to third grade for mothers in all racial and ethnic groups.

A life course perspective of development (Elder 1998) emphasizes the possible interaction between social contexts and developmental stage on individuals' life experiences. This perspective suggests that racial and ethnic differences in parenting stress may vary by child's age. We expect that the increase in parenting stress as children get older would be greater for racial and ethnic minority mothers than for white mothers. First, as peer influence gets more salient, children may do or say things that their parents regard as inappropriate or disrespectful. As noted earlier, racial and ethnic mothers' authoritarian parenting styles may set the stage for more frequent conflict with their children over children's misbehavior (Chao and Kanatsu 2008; Dixon et al. 2008). Second, as children move from preschool to school-age, racial and ethnic minority mothers are more concerned about how to protect their children from harsh experiences of racism (Hughes et al. 2006). Research has shown that black mothers' and Hispanic mothers' higher levels of attempts to control their children's behavior than white mothers' are more pronounced as children get older (Bulcroft et al. 1996; Hill and Tyson 2008; Pinderhughes and Hurley 2008).

#### THE PRESENT STUDY

This paper examines racial-ethnic differences in mothers' parenting stress in two developmental stages. We expect that black, Hispanic, and American Indian mothers are more likely to report higher parenting stress than white mothers because of more disadvantaged structural positions, and more authoritarian parenting styles. We also expect that Asian mothers are more likely to report higher parenting stress than white mothers because of more authoritarian parenting styles. For Hispanic and Asian mothers, we predict that higher parenting stress than white mothers is in part due to a higher rate of foreign-born mothers. Finally, we

expect that racial and ethnic minority mothers are more likely to increase parenting stress from kindergarten to third grade than white mothers.

## METHODS

### *Data*

Data were drawn from the Early Childhood Longitudinal Study, Kindergarten Cohort (ECLS-K), a longitudinal, nationally representative study of American children conducted by the National Center for Education Statistics. This sample of children entered kindergarten in 1998/1999 and is followed through their 8<sup>th</sup> grade year (Tourangeau, Nord, Lê, Sorongon, and Najarian 2009). Data were collected from the children, their families, teachers, and school administrators. We use data from fall kindergarten (W1), spring kindergarten (W2), spring first grade (W4), and spring third grade (W5) years when questions regarding parenting stress and other relevant information were collected. The base-year sample size was  $n = 21,260$ . By W5, 5,955 children were dropped from the study ( $n = 15,305$ , 72.0%). We selected cases where parent interview data were present for all the four waves we used ( $n = 10,998$ , 51.7%). Finally we selected cases where the “primary parent” was the child’s mother in all the four waves ( $N = 9,799$ , 46.1%). Those who dropped from the sample are more likely to be nonwhite, less educated, and single mothers. To adjust for the sample attrition, we used a longitudinal weight for cases where the parent interview was answered in W1 to W5 that was provided in the ECLS-K. Most variables had few missing data, but the largest was 22.4% for frequency of spanking in W5. For missing values, we used the multiple imputation technique suggested by Allison (2002) with five replicates of the dataset.

### *Measures*

*Mothers' parenting stress* is the average of four questions derived from the Aggravation in Parenting Scale which is created based on Abidin's parenting Stress Index (Abidin 1990), including (a) "CHILD does things that really bother me"; (b) "CHILD seems harder to care for than most"; (c) "I often feel angry with CHILD"; and (d) "I find myself giving up more of my life to meet CHILD's needs than I ever expected." (1 = *strongly disagree* to 4 = *strongly agree*). The alphas for parenting stress are .53 and .56 for wave 2 and wave 5, respectively. This scale has been used in national surveys such as the Child Development Supplement to the Panel Survey of Income Dynamics (PSID-CDS) and the National Survey of Children's Health (NSCH) and widely used in prior research (e.g., Kim, Viner-Brown, and Garcia 2007; Moore et al. 2007).

*Mothers' race and ethnicity* is a series of dummy variables, based on self-reports, including non-Hispanic white (reference), non-Hispanic black, Hispanic, Asian and Pacific Islander, American Indian, and multiracial.

*Foreign-born* is a dichotomous variable measured in W4 where mothers who were born outside the United States were assigned 1s and others 0s. ECLS-K did not ask foreign-born status until W4.

Structural conditions include seven indicators. *Mothers' age* was measured in W1. *Mothers' education* was measured in W1 as dummy variables including less than high school, high school diploma (reference), some college, college degree, and advanced degree. *Family income* was measured in W1 and W5 as 13 categories indicating the respondent's total income over the past year. *Mothers' employment status* was measured as dummy variables, not employed, employed part-time, employed full-time (reference), in W1 and W5. The ECLS-K did not have information about mothers' employment in W2. *Mothers' marital status* was a dummy variable measured in W2 and W5 (1 = *married*). We used a dichotomous variable, because there

was no detailed information such as cohabiting, divorced, never-married in W2. *The number of siblings in the household* was measured in W2 and W5.

Parenting styles include two indicators. *Open communication*, which indicates a more contemporary mainstream method of childrearing (Lareau 2003), was measured in W4 as the average of four questions ( $\alpha = .68$ ), including: “I discourage {CHILD} from talking about {his/her} worries because it upsets {him/her}” (reverse coded); “I encourage {CHILD} to talk about {his/her} troubles”; I encourage {CHILD} to tell me about {his/her} friends and activities”; “I encourage {CHILD} to express {his/her} opinions”. *Spanking*, which indicates more traditional, authoritarian parenting (Lareau 2003), was measured in W2 and W5, “Sometimes kids mind pretty well and sometimes they don't. About how many times, if any, have you spanked {CHILD} in the past week?”

Table 1 presents descriptive statistics for variables in the analysis. Racial and ethnic compositions were 62.3% white, 15.4% black, 17.3% Hispanic, 3.1% Asian, and 1.4% American Indians. Although we identified 0.6% of the mothers as “multiracial”, we do not focus on results for this group. About 16% of mothers were foreign-born. The average age was 33.2 years old. Levels of education include 14.2% less than high school, 30.4% high school graduates, 32.6% some college, 17.4% college degrees, and 5.4% advanced degrees.

[Table 1 about here]

### *Analytic Plans*

First, we examine differences in parenting stress and explanatory variables among racial and ethnic groups at a descriptive level. Second, to examine whether the associations between race and ethnicity and parenting stress differ by developmental stage, we used a pooled time series technique (Allison 2005; Johnson 1995). This approach allows us to examine change in

parenting stress as well as change in racial and ethnic differences in parenting stress over time. The two waves of data were pooled (“pooled data”) where data were structured in the way that each wave of observation for each individual was represented by a separate record. Thus the total sample size for the pooled data was the number of individuals multiplied by two. We used random-effects models, rather than fixed-effects, because race and ethnicity, the focus of the present study, was a time-invariant variable. Third, given that the pooled time series models indicated that the associations between race and ethnicity and parenting stress are different by developmental stage, we examined a series of ordinary-least-squared (OLS) regressions for kindergarten and third grade years separately. For each developmental stage, four models were conducted to examine how foreign status, structural positions, and parenting styles are linked to racial/ethnic differences in parenting stress.

## RESULTS

Table 2 presents racial-ethnic differences in parenting stress and explanatory variables at a descriptive level. The levels of parenting stress vary across racial and ethnic groups in both kindergarten and third grade. The average parenting stress score was higher for black, Hispanic, and Asian mothers than for white mothers. Unexpectedly, American Indian mothers rated lower than white mothers. As expected, racial and ethnic groups differ markedly in rates of foreign-born, structural conditions, and parenting styles at the descriptive level. The majority of Hispanic and Asian mothers are foreign-born. Black, Hispanic, and American Indian mothers tend to be younger and less educated than White mothers, while Asian mothers are older and more educated. In both waves, the majority of black mothers and roughly half of American Indian mothers were unmarried. Black, Hispanic, and American Indian mothers all report lower family income compared to whites. In both years, black mothers are more likely to be employed than

white mothers, whereas Hispanic mothers are less likely to be employed. Asian and American Indian mothers are more likely to be either full-time employed or not employed compared to white mothers. In both waves, all racial and ethnic minority groups report more children in the household than do whites. With regard to parenting styles, racial and ethnic minority groups score lower on encouragement for open communication than do whites. In the kindergarten wave, black, Hispanic, and Asian mothers score higher on spanking than white mothers. However, in the third grade wave, Hispanic mothers score lower on spanking than white mothers.

[Table 2 about here]

Next, we examined whether the associations between race and ethnicity and parenting stress vary by developmental stage to determine whether analyses should be done separately for each year. Table 3 presents results from random-effects models using the pooled data. Model 1, the main effect model, indicates that parenting stress is higher when children are in the third grade than when they are in kindergarten ( $b = .055, p < .001$ ). Our main focus here is on the interaction effects in Model 2, which show that the interaction between third grade and black was significant and the sign was positive ( $b = .144, p < .001$ ). The effect of third grade for black mothers was  $.035 + .144 = .179$ . This result suggests that black mothers experienced a greater increase in parenting stress from kindergarten to third grade years than white mothers. In contrast, the interaction between third grade and American Indian was significant and the sign was negative ( $b = -.105, p < .05$ ). The effect of third grade for American Indian mothers was  $.035 - .106 = -.061$ . This result suggests that, unexpectedly, American Indian mothers experience decline in parenting stress from kindergarten to third grade.

[Table 3 about here]

Given the above results that the associations between race and ethnicity and parenting stress differ between kindergarten and third grade years at least for some racial and ethnic groups, we examined multivariate analyses for racial and ethnic differences in parenting stress for kindergarten and third grade years separately. Results for the kindergarten year are presented in Table 4. The main effects model (Model 1) shows that black and Hispanic mothers report more parenting stress than white mothers. Contrary to predictions, Asian and American Indian mothers show little difference from white mothers.

Model 2 added foreign-born status to the main effects model, which shows that foreign-born mothers reported more parenting stress than native-born mothers. By adding this variable, the coefficient for Hispanics became smaller and nonsignificant, suggesting that the greater parenting stress among Hispanics compared to whites was largely due to a higher rate of immigrants among Hispanics. A supplemental analysis (available upon request) indicates that this is largely because of a lower level of family income for foreign-born mothers. Black mothers remain showing more parenting stress than white mothers, which is not surprising as a very small percent of black mothers are foreign-born.

Model 3 shows several structural conditions were related to parenting stress. Lower education was related to more parenting stress, whereas higher education was also related to more parenting stress. Older mothers, married mothers, and mothers with more family incomes were more likely to report less parenting stress. Part-time employment was related to more parenting stress. Having more children at home was related to more parenting stress. When structural variables were included in the model, the coefficient for black mothers became much smaller and nonsignificant, indicating that the greater parenting stress for black mothers than white mothers was mostly due to disadvantaged structural positions of black mothers. A



supplemental analysis (data not shown) indicates that this is mostly due to lower family income and a greater proportion of single mothers among black mothers. When controlling for structural variables, the coefficient for American Indian became significant with a positive sign, indicating that at the same structural positions, American Indian mothers report *lower* parenting stress than white mothers. According to a supplemental analysis (available upon request), the lower level of parenting stress among American Indian mothers was suppressed by lower family income and more single parenthood among them.

Finally, Model 4 shows that two variables indicating parenting styles and styles are related to parenting stress. Mothers who encourage open communication to children tend to report less parenting stress. Mothers who spank children for discipline tend to report more parenting stress than mothers who do not use spanking. By adding these variables, the coefficient for blacks and Asians became larger but stayed nonsignificant.

[Table 4 about here]

Turning to third grade (Table 5), Model 1, the main effects model, suggests that, as found in kindergarten, black and Hispanic mothers report more parenting stress than white mothers. Unlike in kindergarten, American Indian mothers report less parenting stress in the main effects model. Like in the kindergarten year, Hispanic mothers' greater parenting stress than White mothers was mostly due to foreign-born status (Model 2). This was due to disadvantages in structural positions among foreign-born mothers. Unlike in kindergarten, black mothers' greater parenting stress than white mothers remained significant even after controlling for structural positions (Model 3), and parenting (Model 4). Similar to the pattern in the kindergarten year, Asian mothers show little difference from white mothers in the level of parenting stress.

[Table 5 about here]

## DISCUSSION

Race and ethnicity reflects structural and cultural positions that provide parents with unequal levels of demands and resources of raising children. This paper explored racial and ethnic disparities in mother's parenting stress in kindergarten and third grade, focusing on how observed differences are shaped by different structural positions and parenting styles. In addition, we examined variations by developmental stage in the disparities. Shedding light on parenting stress, a role strain in one of major social roles, this study extends our understanding of racial and ethnic disparities in stress and health.

Our findings indicate that black mothers experience higher levels of parenting stress than white mothers in somewhat different ways by developmental stage. In kindergarten, black mothers report more parenting stress than white mothers because of disadvantaged structural positions, especially lower family income and higher rates of single motherhood, higher rates of children's problems, and, to a lesser extent, more authoritarian parenting styles. In contrast, in third grade, black mothers report more parenting stress than white mothers even after controlling for structural, parenting, and child factors. Additionally, we found that black mothers, but not other racial ethnic minority mothers, experience a greater increase in parenting stress from kindergarten to third grade than did white mothers, net of structural conditions and parenting styles.

What might explain the greater increase in parenting stress from kindergarten to third grade for black mothers than white mothers, the pattern that we did not find for other racial and ethnic minority mothers? One possibility is mothers' perceptions of racism and attitudes toward assimilation with the mainstream culture. Some researchers argue that blacks differ from other racial ethnic minorities in that blacks do not assimilate with white culture at the same rate as

Hispanics and Asians (Lee and Bean 2004). Black parents are more likely than other racial and ethnic minority parents to consciously include preparation of their children's awareness of discrimination especially when children get older (Hughes et al. 2006), perhaps because they are more concerned about the possible influence of racism on children. Future research should investigate the role of perceived racism in influencing parenting stress among racial and ethnic minority parents.

Hispanic mothers report more parenting stress than white mothers in both kindergarten and third grade. We found that this is because of the higher rate of immigrants among Hispanic mothers and it is structural disadvantages, rather than cultural differences, that contribute to higher parenting stress among Hispanic immigrants. Hispanic immigrant mothers must use various adaptive strategies to overcome challenges in raising children in a new environment (Perreira, Chapman, and Stein 2006). It would be more difficult to cope with such challenges if they lack financial resources.

We found that Asian mothers are not different from white mothers in the level of parenting stress. Given that Asian mothers tend to be similar to or even higher than white mothers in their SES positions, this is not surprising. The vast majority of Asian mothers in our sample were foreign-born. Although many of these foreign-born mothers may face challenges of cultural adjustments that white mothers may not have to (Shariff 2009), like Hispanic immigrant mothers, having such challenges does not seem to result in greater parenting stress among Asian mothers, perhaps because of better financial resources. One caveat is that the majority of Asian American mothers in our sample were Filipinos (data are available from the authors). With the influence of Spanish culture, the majority of people in the Philippines are Catholic and English is used primary in schools (Eng et al. 2008). Thus Filipinos are more assimilated to mainstream

U.S. culture than other Asian ethnic groups. Future research is warranted to investigate variations in parenting stress among Asian Americans by countries of origin.

Results for American Indian mothers are most unexpected. They report *less* parenting stress than white mothers in kindergarten when structural positions are taken into account, and in third grade, even before these factors are controlled for. In addition, American Indian mothers, but not mothers in other racial ethnic groups, experienced less parenting stress in third grade than kindergarten. Why do American Indian mothers report less parenting stress than white mothers, despite their disadvantages in structural positions? As Pearlin (1989) suggests, it may be due to the role of culture. Prior research has indicated that American Indian families generally have close kinship networks and childrearing tends to be communal (MacPhee et al. 1996). It is possible that American Indian mothers do not feel as much pressure as sole responsibilities for how their children will turn out as white mothers do. Alternatively, American Indian culture might discourage parents from expressing negative emotions (Williams and Harris-Reid 1999). Future research on American Indian parenting and its implications for adult well-being is warranted.

Overall, our findings suggest that differences in structural conditions, particularly family income and single motherhood, are strongly related to racial and ethnic disparities in parenting stress. Some of our findings, including black mothers' higher stress and American Indian mothers' less stress in third grade, indicate that structural conditions alone do not explain all racial and ethnic differences in parenting stress, however. Although results of the present analysis suggest that parenting styles contribute little to racial-ethnic differences in parenting stress, it could be because our measures of parenting styles (i.e., open communication and spanking) might not be ideal to tap different cultural traditions or adaptive strategy to racial and

ethnic discrimination. Future research is warranted to investigate the role of racism, cultural parenting beliefs, and cultural differences in emotion norms, in influencing how stressful mothers feel about raising children.

In addition to some issues that we already discussed, there are a few limitations in the present study that future research should address. First, we focused on mothers' parenting stress due to data limitation. A national survey on children tends to include information about parenting only from the "primary" parent who tends to be the focal child's mother. Researchers should consider including questions for both mothers and fathers asking about their experiences of parenting stress in a national survey. Second, ECLS-K, a representative sample of children in a particular cohort, is not a representative sample of parents. Future research using a nationally representative sample of parents is warranted in order to understand patterns of disparities in experiences of parenting across racial and ethnic groups. Third, we were unable to examine how racial and ethnic differences in parenting stress may change as children grow into adolescence and young adults due to data limitations. It would be interesting to examine racial and ethnic disparities in trajectories of parenting stress from preschool to young adulthood.

In sum, we found that black mothers and foreign-born Hispanic mothers report more parenting stress than white mothers when children are in kindergarten largely due to fewer structural resources, particularly lower family income and single parenthood. We also found some indications of unique effects of race and ethnicity. When children are in third grade, black mothers experience more parenting stress than other racial and ethnic mothers even after controlling for structural conditions and authoritarian parenting styles, whereas American Indian mothers report less parenting stress despite their structural disadvantages. Understanding

disparities in strains in major social roles such as parenting stress would advance our understanding of how racial and ethnic minority status shapes one's health and well-being.

## REFERENCES

- Abidin, Richard R. 1992. "The Determinants of Parenting Behavior." *Journal of Clinical Child Psychology* 21:407-412.
- Abidin, Richard R. 1990. *The Parenting Stress Index Short Form*. Lutz, FL: Psychological Assessment Resources.
- Allison, Paul. 2002. *Missing Data*. Thousand Oaks, CA: Sage.
- Allison, Paul. D. 2005. *Fixed Effects Regression Methods for Longitudinal Data Using SAS*. Cary, NC: SAS Press.
- Aud, Susan, Mary Ann Fox, and Angelina KewalRamani. 2010. *Status and Trends in the Education of Racial and Ethnic Groups* (NCES 2010-015). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Avison, William R., Jennifer Ali, and David Walters. 2007. "Family Structure, Stress, and Psychological Distress: A Demonstration of the Impact of Differential Exposure." *Journal of Health and Social Behavior* 48:301-317.
- Bartel, Ann P. 1981. "Race Differences in Job Satisfaction: A Reappraisal." *The Journal of Human Resources* 16: 294 – 303.
- Broman, Clifford L. 1993. "Racial Differences in Marital Well-Being." *Journal of Marriage and the Family* 55: 724 – 732.
- Bulanda, Jennifer R., and Susan L. Brown. 2007. "Racial-Ethnic Differences in Marital Quality and Divorce." *Social Science Research* 36: 945 – 967.

- Bulcroft, Richard A., Dianne C. Carmondy, and Kris A. Bulcroft. 1996. "Patterns of Parental Independence Giving to Adolescents: Variations by Race, Age, and Gender of Child." *Journal of Marriage and Family* 58:866-883.
- Chao, Ruth and Akira Kanatsu. 2008. "Beyond Socioeconomics: Explaining Ethnic Group Differences in Parenting Through Cultural and Immigration Processes." *Applied Developmental Science* 12:181-187.
- Cooper, Carey E., Sara S. McLanahan, Sarah O. Meadows, and Jeanne Brooks-Gunn. 2009. "Family Structure Transitions and Maternal Parenting Stress." *Journal of Marriage and Family* 71:558-574.
- Deater-Deckard, Kirby. 2004. *Parenting Stress*. New Haven, CT: Yale University Press.
- Deater-Deckard, Kirby and Sandra Scarr. 1996. "Parenting Stress among Dual Earner Mothers and Fathers. Are There Gender Differences?" *Journal of Family Psychology* 10:45-59.
- Dixon, Sara V., Jeanne Brooks-Gunn, and Julia A. Graber. 2008. "The Roles of Respect for Parental Authority and Parenting Practices in Parent-Child Conflict Among African American, Latino, and European American Families." *Journal of Family Psychology* 22:1-10.
- Edin, Kathryn, Maria KeFalas. 2005. *Promises I Can Keep*. Berkley, CA: University of California Press.
- Elder, Glen H. 1998. "The Life Course as Developmental Theory." *Child Development* 69:1-12.
- Fagot, Beverly I., and Kate Kavanagh. 1993. "Parenting During the Second Year: Effects of Children's Age, Sex, and Attachment Classification." *Child Development* 64: 258 - 271.



- Franco, Lydia M., Kathleen J. Pottick, and Chien-Chung Huang. 2010. "Early Parenthood in a Community Context: Neighborhood Conditions, Race-Ethnicity, and Parenting Stress." *Journal of Community Psychology* 38:574-590.
- Galinsky, Ellen. 1987. *The Six Stage of Parenthood*. Cambridge, MA: Da Capo Press.
- George, Linda K., Scott M. Lynch. 2003. "Race Differences in Depressive Symptoms: A Dynamic Perspective on Stress Exposure and Vulnerability." *Journal of Health and Social Behavior* 44: 353 – 369.
- Gershoff, Elizabeth T., Jennifer E. Lansford, Holly R. Sexton, Pamela Davis-Kean, and Arnold J. Sameroff. 2012. "Longitudinal Links Between Spanking and Children's Externalizing Behaviors in a National Sample of White, Black, Hispanic, and Asian American Families." *Child Development* 83:838-843.
- Goldberg, Susan, Magdalena Janus, Jane Washington, Robert J. Simmons, Ian MacLusky, and Rodney S. Fowler. 1997. "Prediction of Preschool Behavioral Problems in Healthy and Pediatric Samples." *Journal of Developmental and Behavioral Pediatrics* 18: 304 - 313.
- Goldsteen, Karen and Catherine E. Ross. 1989. "The Perceived Burden of Children." *Journal of Family Issues* 10:504-526.
- Greenfield, Emily A. and Nadine F. Marks. 2006. "Linked Lives: Adult Children's Problems and Their Parents' Psychological and Relational Well-Being." *Journal of Marriage and Family* 68: 442–454.
- Greenhaus, Jeffery H., Saroj Parasuraman, and Wayne M. Wormley. 1990. "Effects of Race on Organizational Experiences, Job Performance Evaluations, and Career Outcomes." *Academy of Management Journal* 33: 64 – 86.

- Gruber, Enide, Ralph J. DiClemente, and Martin M. Anderson. 2002. "Risk-Taking Behavior Among American Indian, Black, and White Adolescents." In Nijole V. Benokraitis (Ed.), *Contemporary Ethnic Families in the United States* (pp. 263 - 268). Upper Saddle River, NJ: Pearson.
- Hill, Nancy E. and Diana F. Tyson. 2008. "Excavating Culture: Ethnicity and Context as Predictors of Parenting Behavior." *Applied Developmental Science* 12:188-197.
- Hummer, Robert A. and Erin R. Hamilton. 2010. "Race and Ethnicity in Fragile Families." *The Future of Children* 20:113-131.
- Hughes, Diane, James Rodriguez, Emilie P. Smith, Deborah J. Johnson, Howard C. Stevenson, and Paul Spicer. 2006. "Parents' Ethnic-Racial Socialization Practices: A Review of Research and Directions for Future Study." *Developmental Psychology* 42: 747 – 770.
- Johnson, David R. 1995. "Alternative Methods for the Quantitative Analysis of Panel Data in Family Research: Pooled Time Series Models." *Journal of Marriage and the Family* 57:1065 – 1077.
- Julian, Teresa W., Patrick C. McKenry, and Mary W. McKelvey. 1994. "Cultural Variations in Parenting: Perceptions of Caucasian, African-American, Hispanic, and Asian-American Parents." *Family Relations* 43:30-37.
- Kim, Hyun H., Samara I. Viber-Brown, and Jorge Garcia. 2007. "Children's Mental Health and Family Functioning in Rhode Island." *Pediatrics* 119:S22 – S28.
- Lansford, Jennifer E., Kirby Deater-Deckard, Kenneth A. Dodge, John E. Bates, and Gregory S. Pettit. 2004. "Ethnic Differences in the Link Between Physical Discipline and Later Adolescent Externalizing Behaviors." *Journal of Child Psychology and Psychiatry* 45:801-812.

- Lareau, Annette. 2003. *Unequal Childhoods: Class, Race, and Family Life*. Berkeley, CA: University of California Press.
- Lee, Jennifer and Frank D. Bean. 2004. "America's Changing Color Lines: Immigration, Race/ethnicity, and Multiracial Identification." *Annual Review of Sociology* 30:221-242.
- Leidy, Melinda S., Nancy G. Guerra, and Rose I. Toro. 2010. "Positive Parenting, Family Cohesion, and Child Social Competence Among Immigrant Latino Families." *Journal of Family Psychology* 24:252-260.
- MacPhee, David, Janet Fritz, and Jan Miller-Heyl. 1996. "Ethnic Variations in Personal Social Networks and Parenting." *Child Development* 67:3278-3295.
- Martin, Joyce A., Brady E. Hamilton, Stephanie J. Ventura, Michelle J.K. Osterman, Sharon Kirmeyer, T.J. Mathews, and Elizabeth C. Wilson, M.P.H. 2011. "Births: Final data for 2009." *National Vital Statistics Reports*. Vol. 60 No 1. Hyattsville, MD: National Center for Health Statistics.
- Martinez, Gladys M., Kimberly Daniels, and Anjani Chandra. 2012. "Fertility of men and women aged 15–44 years in the United States: National Survey of Family Growth, 2006–2010. National health statistics reports; no. 51." Hyattsville, MD: National Center for Health Statistics.
- Mathews, T.J. and Brady E. Hamilton. 2009. "Delayed Childbearing: More Women Are Having Their First Child Later in Life. NCHS Data Brief, No 21." Hyattsville, MD: National Center for Health Statistics.
- McBride, Brent A., Sarah J. Schoppe, and Thomas R. Rane. 2002. "Child Characteristics, Parenting Stress, and Parental Involvement: Fathers Versus Mothers." *Journal of Marriage and Family* 64:998–1011.

- McLeod, Jane D., and James M. Nonnemaker. 1999. "Social Stratification and Inequality." In Carol S. Aneshensel and Jo C. Phelan (Eds.), *Handbook of the Sociology of Mental Health* (pp. 321 – 344). New York: Kluwer Academic/Plenum Publishing.
- Moore, Christy G., Janice C. Probst, Mark Tompkins, Steven Cuffe, and Amy B. Martin. 2007. "The Prevalence of Violent Disagreements in U.S. families: Effects of Residence, Race/Ethnicity, and Parenting Stress." *Pediatrics* 119:S68 – S76.
- Motel, Seth and Eileen Patten. 2012. *The 10 Largest Hispanic Origin Groups: Characteristics, Rankings, Top Counties*. Pew Hispanic Center. Washington, D.C.
- Mulsow, Miriam, Yvonne M. Caldera, Marta Pursley, Alan Reifman, and Aletha C. Huston. 2002. "Multilevel Factors Influencing Maternal Stress during the First Three Years." *Journal of Marriage and Family* 64:944–956.
- Nelson, Margaret K. 2010. *Parenting Out of Control: Anxious Parents in Uncertain Times*. New York: New York University Press.
- Nomaguchi, Kei M. 2012. "Parenthood and Psychological Well-being: Clarifying the Role of Child Age and Parent-Child Relationship Quality." *Social Science Research* 41: 489 – 498.
- Nomaguchi, Kei M., and Susan L. Brown. 2011. "Parental Strains and Rewards among Mothers: The Role of Education." *Journal of Marriage and Family* 73:621–636.
- Parke, Ross D., and Raymond Buriel. 2002. "Socialization concerns in African, American Indian, Asian American, and Latino Families." In Nijole V. Benokraitis (Ed.), *Contemporary Ethnic Families in the United States* (pp. 18- 29). Upper Saddle River, NJ: Pearson.
- Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30:241-256.

- Perreira, Krista M., Mimi V. Chapman, and Gabriela L. Stein. 2006. "Becoming an American Parent: Overcoming Challenges and Finding Strength in a New Immigrant Latino Community." *Journal of Family Issues* 27: 1383 – 1414.
- Pettit, Jan. 1990. *Utes: The Mountain People*. Revised Edition. Boulder, CO: Johnson.
- Pew Research Center. 2012. *The Rise of Asian Americans*. Pew Social & Demographic Trends. Washington, D.C.
- Pinderhughes, Ellen E. and Sean Hurley. 2008. "Disentangling Ethnic and Contextual Influences Among Parents Raising Youth in High-Risk Communities." *Applied Developmental Science* 12:211-219.
- Raley, Kelly R., Elizabeth Durden, and Elizabeth Wildsmith. 2004. "Understanding Mexican-American Marriage Patterns Using a Life-Course Approach." *Social Science Quarterly* 85:872-890.
- Raphael, Jean L., Yiqun Zhang, Hao Liu, and Angelo P. Giardino. 2009. "Parenting Stress in US Families: Implications for Paediatric Healthcare Utilization." *Child: Care, Health and Development* 36: 216 – 224
- Ross, Catherine E., and Marieke Van Willigen. 1996. "Gender, Parenthood, and Anger." *Journal of Marriage and the Family* 58: 572 - 584.
- Sandefur, Gary D. and Carolyn A. Liebler. 1997. "The Demography of American Indian Families." *Population Research and Policy Review* 16:95-114.
- Shariff, Aneesa. 2009. "Ethnic Identity and Parenting Stress in South Asian Families: Implications for Culturally Sensitive Counselling." *Canadian Journal of Counselling* 43:35-46.
- Shulz, Amy, David Williams, Barbara Israel, Adam Becker, Edith Parker, Sherman A. James, and James Jackson. 2000. "Unfair Treatment, Neighborhood Effects, and Mental Health in the Detroit Metropolitan Area." *Journal of Health and Social Behavior* 41:314-332.

- Slade, Eric P. and Lawrence S. Wissow. 2004. "Spanking in Early Childhood and Later Behavior Problems: A Prospective Study of Infants and Young Toddlers." *Pediatrics* 113:1321-1330.
- Tourangeau, Karen, Christine Nord, Thanh Lê, Alberto G. Sorongon, and Michelle Najarian. 2009. *Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), Combined User's Manual for the ECLS-K Eighth-Grade and K-8 Full Sample Data Files and Electronic Codebooks* (NCES 2009-004). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- U.S. Bureau of Labor Statistics, U.S. Department of Labor. 2011. Labor Force Characteristics by Race and Ethnicity, 2010. Report 1032. Retrieved on July 17, 2012 from [www.bls.gov/cps/cpsrace2010.pdf](http://www.bls.gov/cps/cpsrace2010.pdf).
- U.S. Census Bureau. 2012. *Statistical Abstract of America*. Retrieved on July 6, 2012 from <http://www.census.gov/compendia/statab/>.
- U.S. Department of Education, National Center for Education Statistics. 1992. *ECLS-K K-8 Full Sample Public-Use Data Files and Electronic Codebooks* (CD-ROM). (NCES 2009-005). Washington, DC.
- Wakschlag, Lauren S. and Kate Keenan. 2001. "Clinical Significance and Correlates of Disruptive Behavior in Environmentally At-Risk Preschoolers." *Journal of Clinical Child & Adolescent Psychology* 30:262-275.
- Williams, David R., and Chiquita Collins. 1995. "US Socioeconomic and Racial Differences in Health: Patterns and Explanations." *Annual Review of Sociology* 21: 349 – 386.
- Zhou, Min. 1997. "Growing Up American: The Challenge Confronting Immigrant Children and Children of Immigrants." *Annual Review of Sociology* 23: 63 - 95

Table 1. Means (standard deviations) or Percentage Distributions for Independent and Control Variables (N = 9,799).

	<i>M</i>	<i>(Std)</i>	% Missing
Mother's race/ethnicity			
White	62.25%		0.0
Black	15.40%		0.0
Hispanic	17.25%		0.0
Asian	3.06%		0.0
American Indian	1.43%		0.0
Multiracial	0.61%		0.0
Mother foreign-born	16.26%		0.2
Structural conditions			
Mothers' education			
Less than high school	14.16%		0.0
High school diploma	30.40%		0.0
Some college	32.61%		0.0
College degree	17.40%		0.0
Advanced degree	5.43%		0.0
Mother's age (18-83)	33.16	(6.34)	0.1
Married in W2	70.65%		0.0
Married in W5	70.90%		0.1
Family income in W1 (1-13)	7.63	(3.23)	0.0
Family income in W5 (1-13)	8.04	(3.23)	23.1
Mother's employment status in W2			
Full-time	45.41%		0.4
Part-time	22.12%		0.4
Nonemployed	32.47%		0.4
Mother's employment status in W5			
Full-time	50.41%		1.7
Part-time	22.12%		1.7
Nonemployed	27.47%		1.7
The number of siblings in W2 (0-14)	1.48	(1.12)	0.0
The number of siblings in W5 (0-11)	1.58	(1.12)	0.0
Cultural factors			
Open communication (1.25-4)	3.60	(0.45)	0.4
Spanking in W2 (0-30)	0.53	(1.15)	20.8
Spanking in W5 (0-25)	0.27	(0.72)	22.4

Table 2. Descriptive Statistics for Variables by Race/Ethnicity (N = 9,799)

	White 67.1%		Black 10.6%		Hispanic 14.8%		Asian/P.I. 5.4%		American Indian 1.4%		Multiracial 0.7%	
	<i>M</i>	<i>Std</i>	<i>M</i>	<i>Std</i>	<i>M</i>	<i>Std</i>	<i>M</i>	<i>Std</i>	<i>M</i>	<i>Std</i>	<i>M</i>	<i>Std</i>
Dependent variables												
Parenting stress in W2	1.52	(0.46)	1.58	(0.65)***	1.59	(0.61)***	1.55	(0.40)**	1.44	(0.48)***	1.62	(0.45)***
Parenting stress in W5	1.54	(0.49)	1.73	(0.70)***	1.59	(0.53)***	1.58	(0.37)**	1.37	(0.44)***	1.56	(0.49)
Mother foreign-born	3.2%		6.2%	***	63.3%	***	73.6%	***	0.0%	***	10.5%	***
Structural conditions												
Mother's education												
Less than high school	6.9%		15.9%	***	39.9%	***	10.1%	***	15.2%	***	6.1%	
High school diploma	28.9%		35.9%	***	30.9%	***	30.3%		28.0%	***	39.9%	***
Some college	34.7%		37.1%	***	21.8%	***	21.8%	***	43.5%	***	32.4%	
College degree	21.9%		9.8%	***	6.2%	***	28.8%	***	10.9%	***	20.3%	
Advanced degree	7.6%		1.3%	***	1.2%	***	9.0%	*	2.4%	***	1.3%	***
Mothers' age	33.69	(5.61)	32.45	(9.80)***	31.75	(6.55)***	34.84	(4.18)***	32.14	(6.59)***	31.11	(7.15)***
Married in W2	79.4%		36.2%	***	70.2%	***	84.0%	***	47.4%	***	69.1%	***
Married in W5	78.2%		39.0%	***	73.0%	***	80.3%	*	53.4%	***	69.6%	***
Family income in W1	8.68	(2.74)	5.37	(3.69)***	5.86	(3.11)***	8.20	(2.25)***	6.06	(3.34)***	7.96	(2.79)***
Family income in W5	9.04	(2.74)	5.74	(3.83)***	6.48	(3.14)***	8.75	(2.18)***	6.34	(3.61)***	8.18	(2.89)***
Mother's employment status in W2												
Full-time	43.3%		59.8%	***	38.6%	***	49.0%	***	53.1%	***	40.6%	
Part-time	25.8%		14.2%	***	17.9%	***	17.4%	***	12.5%	***	23.4%	
Nonemployed	30.9%		26.0%	***	43.5%	***	33.6%	*	34.4%	*	36.0%	*
Mother's employment status in W5												
Full-time	47.2%		64.1%	***	47.5%	***	60.1%	***	56.0%	***	47.9%	
Part-time	26.3%		12.2%	***	17.5%	***	18.1%	***	13.1%	***	27.3%	
Nonemployed	26.5%		23.7%	***	35.0%	***	21.8%	***	30.9%	**	24.8%	
The number of siblings in W2	1.38	(0.95)	1.59	(1.56)***	1.68	(1.30)***	1.53	(1.04)***	2.01	(1.69)***	1.34	(0.92)



The number of siblings in W5	1.47 (0.97)	1.70 (1.57)***	1.80 (1.21)***	1.68 (1.04)***	2.13 (1.73)***	1.54 (1.08)
Cultural factors						
Open Communication	3.69 (0.38)	3.45 (0.61)***	3.47 (0.55)***	3.42 (0.41)***	3.62 (0.41)***	3.60 (0.44)***
Spanking in W2	0.45 (1.05)	0.83 (1.78)***	0.57 (1.13)***	0.56 (0.73)***	0.35 (0.82)**	0.51 (0.93)
Spanking in W5	0.24 (0.65)	0.44 (0.94)***	0.22 (0.83)*	0.38 (0.64)***	0.25 (0.61)	0.39 (1.07)***

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

*Note:* Significance tests for differences between means or proportions for whites versus blacks, Hispanics, Asian Americans, or American Indians.

Table 3. Random-Effects Models Predicting Interactions Between Race and Ethnicity and Developmental Stage on Parenting Stress (N = 19,598 person-years).

	Model 1			Model 2		
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>	
Developmental stage <sup>a</sup>						
Third grade	.055	.006	***	.035	.007	***
Mother's race and ethnicity <sup>a</sup>						
Black	.060	.015	***	-.156	.028	***
Hispanic	-.009	.016		.002	.028	
Asian	.000	.026		-.024	.055	
American Indian	-.114	.037	**	.046	.080	
Multiracial	.058	.055		.178	.120	
Mother's race and ethnicity x developmental stage <sup>a</sup>						
Black x third grade				.144	.016	***
Hispanic x third grade				-.008	.015	
Asian x third grade				.016	.032	
American Indian x third grade				-.106	.047	*
Multiracial x third grade				-.079	.071	
Mother foreign-born	.033	.016	*	.034	.016	*
Structural factors						
Mothers' education <sup>a</sup>						
Less than high school	.049	.016	**	.049	.016	**
Some college	-.004	.011		-.004	.011	
College degree	.032	.014	*	.032	.014	*
Advanced degree	.097	.021	***	.097	.021	***
Mother's age	-.003	.001	***	-.003	.001	***
Married	-.017	.010		-.019	.010	
Family income	-.011	.002	***	-.011	.002	***
Mother's employment status <sup>a</sup>						
Part-time	.024	.009	**	.025	.009	**
Nonemployed	.016	.009		.015	.009	
The number of siblings	-.022	.004	***	-.022	.004	***
Cultural factors						
Open communication	-.097	.010	***	-.097	.010	***
Spanking	.053	.004	***	.054	.004	***

<sup>a</sup>Omitted reference groups are: White, kindergarten, white x kindergarten, high school diploma, and full-time employed

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Table 4. Coefficients from Ordinary-Least-Squares Regression Models Predicting the Associations Between Race and Ethnicity and Parenting Stress: Kindergarten (N = 9,799).

	Model 1		Model 2		Model 3		Model 4					
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>				
Mother's race and ethnicity												
White	---	---	---	---	---	---	---	---				
Black	.063	.015	***	.061	.015	***	.005	.016	-.026	.016		
Hispanic	.073	.015	***	.024	.018		-.022	.019	-.025	.018		
Asian	.032	.030		-.026	.033		-.019	.033	-.044	.032		
American Indian	-.076	.044		-.073	.044		-.105	.044	*	-.090	.043	*
Multiracial	.101	.066		.096	.066		.074	.065		.068	.064	
Mother foreign-born				.082	.019	***	.074	.019	***	.067	.019	***
Structural conditions												
Mother's education												
Less than high school							.041	.018	*	.033	.018	
High school diploma							---	---		---	---	
Some college							-.015	.013		-.004	.013	
College degree							.037	.017	*	.047	.017	**
Advanced degree							.086	.026	***	.092	.026	***
Mother's age							-.005	.001	***	-.004	.001	***
Married in W2							-.036	.014	**	-.042	.013	**
Family income in W1							-.016	.002	***	-.011	.002	***
Mother's employment status in W2												
Full-time							---	---		---	---	
Part-time							.044	.014	**	.048	.014	***
Nonemployed							.005	.012		.003	.012	
The number of siblings in W2							-.027	.005	***	-.029	.005	***
Cultural factors												
Communication										-.096	.012	***
Spanking in W2										.067	.004	***
Intercept	1.519	.006	***	1.516	.007	***	1.863	.031	***	2.126	.053	***
R <sup>2</sup>	.005***			.007***			.030***			.059***		

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Table 5. Coefficients from Ordinary-Least-Squares Regression Models Predicting the Associations Between Race and Ethnicity and Parenting Stress: Third Grade (N = 9,799).

	Model 1			Model 2			Model 3			Model 4		
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>	
Mother's race and ethnicity												
White	---	---		---	---		---	---		---	---	
Black	.195	.015	***	.193	.015	***	.135	.016	***	.108	.016	***
Hispanic	.053	.014	***	.026	.018		-.019	.019		-.024	.019	
Asian	.042	.031		.010	.034		.014	.034		-.019	.034	
American Indian	-.169	.044	***	-.167	.044	***	-.209	.044	***	-.206	.044	***
Multiracial	.023	.067		.020	.067		.004	.067		-.012	.066	
Mother foreign-born				.045	.020	*	.034	.020		.034	.020	
Structural conditions												
Mothers' education												
Less than high school							.037	.018	*	.033	.018	
High school diploma							---	---		---	---	
Some college							-.018	.014		-.009	.014	
College degree							.017	.017		.027	.017	
Advanced degree							.103	.026	***	.117	.026	***
Mother's age							-.003	.001	***	-.003	.001	***
Married in W5							-.025	.014		-.028	.014	
Family income in W5							-.016	.002	***	-.014	.002	***
Mother's employment status in W5												
Full-time							---	---		---	---	
Part-time							-.005	.014		-.002	.014	
Nonemployed							.015	.013		.012	.013	
The number of siblings in W5							-.014	.005	**	-.015	.005	**
Cultural factors												
Communication										-.091	.012	***
Spanking in W5										.081	.009	***
Intercept	1.537	.007	***	1.536	.007	***	1.827	.033	***	2.119	.054	***
R <sup>2</sup>	.020***			.020***			.037***			.055***		

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .