Maternal Fears of Children's Outdoor Play: The Influence of Race/ethnicity, Neighborhood Characteristics, and Crime Rates

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This is an extended abstract; a paper in progress!

Investigating the determinants of children's outdoor play unites scholarship on the salience of neighborhoods in families' lives, the influence of perceptions of safety on behaviors, children's health, and parenting. Utilizing multiple waves of the Fragile Families and Child Wellbeing Study (N=3,448), we predict the determinants of maternal fear of children playing outdoors due to violence, testing associations between maternal fear and neighborhood physical and social characteristics, crime rates, maternal mental health, and social support. We find large racial differences in maternal fear, such that blacks have nearly three times the odds, and Hispanics more than twice the odds, of fear compared to white mothers, but that these racial differences are due mainly to racial and social stratification of neighborhoods. We also find that poverty, living in public housing, poor mental health, high levels of stress, and low social support are associated with higher likelihood of maternal fear. Additionally, we find that maternal perceptions of neighborhood collective efficacy and living in a Census tract with a higher proportion of blacks and households in poverty are associated with a higher likelihood of fear. Finally, we do not find support for the hypothesis that objective violent crime rates at the city level are associated with maternal fear.

Introduction

As the prevalence of obesity among young, preschool and kindergarten-aged children has risen (Ogden et al 2002; Balistreri and Van Hook 2010), scholars have increasingly called for analysis of the unique factors associated with young children's activity levels and well-being; still, few such studies exist (Papas et al 2007). Outdoor play has been shown to be significantly correlated with physical activity among preschoolers (Burdette, Whitaker and Daniels 2004; Kimbro, Brooks-Gunn, & McLanahan 2010); thus understanding the determinants of young children's outdoor play is central to fighting the obesity epidemic. We use data from a large, nationally representative birth cohort study of urban children to examine how individual and neighborhood-level factors, as well as city-level crime rates, influence mothers' perceptions of

whether or not they fear allowing their children to play outside. We also assess racial/ethnic differences in the prevalence of maternal fear of outdoor play for children.

Neighborhoods, Safety and Fear

Recent research on children's outdoor play and physical activity has increasingly found neighborhood social indicators rather than physical environment factors to be more significantly associated with higher levels of activity (Franzini et al 2009). Scholars have theorized that physical factors—such as residential density, physical disorder (for example the prevalence of broken windows and graffiti), and the absence or presence of suitable play spaces—may be less significant predictors of children's activity levels because children get most of their physical activity at school and outside the neighborhood (Franzini et al 2009; Davidson and Lawson 2006). However, this reasoning may be less relevant for young children (age 5 and under) who are more likely to spend greater amounts of time at home and in their neighborhoods. Additionally, scholars have hypothesized that physical environment measures may be less salient when children's physical activity is the dependent variable because it is largely determined by parental decisions (Franzini et al 2009), especially for young children.

Furthermore, scholarship on the neighborhood factors most associated with children's outdoor play has tended to focus on parental perceptions of safety (Carver, Timperio, and Crawford 2008; Davison and Lawson 2006; Gable et al 2007; Lumeng et al 2006; Timperio et al 2005; Weir, Etelson and Brand 2006), although at least one study found no effect for preschool children's outdoor play (Burdette and Whitaker 2005). Similarly, scholars have examined physical, built environment aspects of neighborhood safety such as park safety (Sallis et al 2006; Singh, Siahpush and Kogan 2010), crime, and poorly lit streets (Lang and Caraher 1998; Rose and Richards 2007; Sing, Siahpush and Kogan 2010) and their associations with children's

activity levels. However, to the best of our knowledge, no one has directly examined the determinants of parental fears of letting children play outside.

Fear, a measure frequently seen in criminology research (for example, Warr and Ellison 2000), has been found to capture individuals' perceptions of danger but also more general neighborhood conditions (Carvalho and Lewis 2003). More importantly, asking parents about their fears taps into both assessments of the relative safety of their neighborhood as well as their emotions associated with it, as opposed to questions about safety itself which parents may answer more specifically or objectively (Carver et al 2010). Scholarship has demonstrated a link between adults' fears of crime and their own physical activity levels (Stafford, Chandola, and Marmot 2007), suggesting that parental fears may also impact children's levels of physical activity. Additionally, scholarship on *altruistic fear*—fear for others (Warr and Ellison 2000)--, which has been shown to elicit even stronger reactions and behavior changes compared to fear for oneself (Warr and Ellison 2000; Snedker 2006). For example, behavioral responses of parents to neighborhood violence previously identified include: avoiding certain neighborhood locations (Brodsky 1996; Cook and Fine 1995); identifying safe spaces (Furstenberg Jr 1993); completing activities at certain times of the day (Burton and Graham 1998); requiring older siblings to accompany younger children (Clark 1983; Jarrett 1998); avoiding certain individual neighbors and seeking out others (Anderson 1990; Puntenney 1997); and other supervision strategies (Coley and Hoffman 1996). In other words, it is clear that fear of violence can have significant consequences for parenting strategies and choices, and taken all together, this scholarship suggests that parental fears of children's outdoor play could be very significant for overall child physical activity, weight, and health.

Given the heavy emphasis on neighborhood safety as a determinant of physical activity levels, we believe that parental perceptions of fear—i.e., lack of safety and its emotional consequences—can allow us to begin to understand the decision-making process parents engage in when determining whether or not to encourage outdoor play, which is a determinant of children's health. We focus on three levels of measures: individual parent-child characteristics, neighborhood social and physical measures, and city-level variables, and examine the strength of their associations with mothers' fears to let their children play outside.

Individual-level parent-child characteristics including race, family socioeconomic status (SES) and mother's age (Singh, Siahpush and Kogan 2010; McLoyd, 1990; Menaghan 1999; Pinderhughes, Nix, Foster and Jones 2000), along with the child's gender and age (Carver et al 2010, Bacha et al 2010) have been shown to be significantly associated with children's activity levels, and, we hypothesize, will similarly be associated with maternal fear. Additionally, scholars have also examined how mother's mental health and stress (Leventhal and Brooks-Gunn 2000; Aisenberg 2001; Ross 2000) are related to both neighborhood conditions and parenting practices. Maternal mental health and its impact on child well-being is also linked to levels of support from spouses/partners (Chang, Halpern and Kaufman 2007; Mezulis, Hyde and Clark 2004; Williams, Sassler and Nicholson 2008) as well as co-residing with a grandmother who can both support a mother but also add to her stress (Black and Kitz 1996; Chase-Lansdale, Brooks-Gunn, and Zamsky 1994). Given the emotional and psychological aspects of fear, we hypothesize that maternal mental health will be strongly associated with fear to let one's child play outside, with depressed mothers more likely to report fear.

At the neighborhood level, we focus on two categories of neighborhood indicators: physical environment measures and neighborhood social characteristics. Here, the evidence is

much more mixed. Some scholars have found physical environment measures to be more significant in predicting child and adolescent physical activity (Singh, Siapush and Kogan 2010), while others have found stronger associations among children's activity levels and general well-being with measures of neighborhood social characteristics (Cradock et al 2009). Even among those advocating the use of social characteristics, it is unclear which measure(s) are most significant (Franzini et al 2008), with some scholars citing the large impact of mothers' collective efficacy scores (Kimbro et al. 2010), while others focus on the levels of Blacks and Hispanics present in the neighborhood (Grow et al 2010), so we include both types of measures in our analysis. Because we understand fear to be based not just on logical assessments of risk and safety, but also as an emotional response to general neighborhood conditions, we hypothesize that measures of neighborhood social context will be more strongly associated with fear compared to measures of the neighborhood physical environment.

Additionally, we recognize the possible effects of city-level differences. We specifically focus on city crime rates based on Harding's (2009) positioning of neighborhood violence as a key mechanism in the relationship between neighborhoods and child and adolescent outcomes. He argues that violence impacts mental health by increasing stress (Charles, Dinwiddie et al. 2004) and by limiting residents' access to public spaces (Anderson 1999; Venkatesh 2002), which deprives them of opportunities to socialize and build collective efficacy with neighbors (Harding 2009). Unfortunately due to data limitations our measure of crime is at the city, not neighborhood, level; nevertheless, we include this measure as a possible indicator of differences in maternal fear by city.

Finally, we recognize the complex interplay among many of these factors. For example, one central effect of community violence is worsened mental health, and exposure to violence

has been linked to high levels of depression and anxiety among both mothers (Aisenberg 2001) and children (Wallen and Rubin 1997). In addition to impacting parents' own mental health, exposure to community violence may also decrease parental abilities to buffer its effects on their children (Aisenberg 2001). Furthermore, mothers who have been the victim of domestic violence (also often referred to as intimate partner violence)—a distinct measure separate from city violent crime—are particularly at risk for poor mental health (Coker et al 2002; Mullen, Walton et al. 1988; Golding 1999; Koss and Heslet 1992). Petersen, Gazmararian and Clark (2001) specifically found that women reporting intimate partner violence were two times more likely to be depressed and three times more likely to have poor self-esteem compared to women who had not been victimized, demonstrating the potentially strong effects of intimate partner violence on maternal mental health. Also, previous scholarship has demonstrated the increased risk for domestic violence incidents among couples living in poverty and black couples (Cunradi, Caetano et al. 2000), and O'Campo and colleagues (2005) have hypothesized that this may be due to low levels of neighborhood collective efficacy (Browning 2002; Miles-Doan 1998). In other words, it is not enough for us to consider only individual characteristics or neighborhood social characteristics; rather, we must examine the multiple dimensions of individual and neighborhood-level factors which may come together to influence maternal fear.

We are centrally interested in one specific behavioral response to neighborhood-based altruistic fear: mothers' restriction of children's outdoor play. Outdoor play has been linked to children's health and obesity (Kimbro et al., 2010), and previous research suggests that, like other behaviors, children's outdoor play is affected by parental fears of safety (Valentine and McKendrck 1997). Recently, Brown et al (2008) found a significant connection between community crime and sexual offender rates and indoor sedentary behavior among children.

Similarly, Burdette et al (2003) found a positive relationship between poor maternal mental health and the amount of time preschool children spend watching T.V. Most directly, Clements (2004) found that over three-quarters of mothers cite safety and crime concerns when explaining why they prevent their children from playing outdoors. There seems to be agreement that neighborhood conditions are related to time spent outdoors (Boslaugh, Luke et al. 2004) and that parental fears for their children can lead to behavioral responses, including restricting activities (Brodsky 1996; Furstenberg 1993). However, to our knowledge, no study has directly tested the relationship between neighborhood disadvantage, crime rates, and maternal fears of children's outdoor play, nor have studies specifically examined the moderating and/or mediating effects of neighborhood collective efficacy and maternal mental health. We also extend the analysis one step further, by examining racial differences in maternal fear of children playing outdoors, as well as the contributions of our covariates of interest in mediating those racial/ethnic differences.

Research Methods

Data

The Fragile Families and Child Wellbeing Study (FFCWS) follows a birth cohort of urban parents and their children (Baseline N = 4,898), and when weighted it is representative of all births in large U.S. cities in 1998-99. The study oversampled unmarried mothers, who make up about three-quarters of the sample, with the remaining one-quarter of mothers married at the time of the child's birth. Follow-up interviews were conducted when the child was one, three, and five years old. Data for this paper are from the 3,448 mothers and children who completed all five waves of the core study, and who were still living in the same city when the child was five years old. U.S. Census 2000 data for Census tracts were merged with the FFCWS data file. For further information about the Fragile Families Study, please visit

http://crcw.princeton.edu/ff.asp. These data are ideal for our research questions because they are, as far as we know, the only longitudinal data from multiple large U.S. cities on young children which incorporate both mother-reported and objectively-measured neighborhood characteristics. In addition, the data include a large proportion of low SES families, so a wide range of neighborhood conditions and experiences are represented.

Measures

Our outcome of interest is a dichotomous measure of whether a mother fears allowing her child to play outside due to violence (1=fearful). We are not able to distinguish whether a mother is responding to the question as though the child would be playing outside *alone* relative to playing outside with adult supervision. This measure is taken from the five-year survey.

Maternal and Child Background Characteristics

With the exception of measures which reflect change from the three-year to five-year survey, almost all covariates are measured at the three-year wave (see below for exceptions). The purpose of this is to more carefully clarify the causal order of which factors influence maternal fear. The data provide a variety of background factors likely to be related to maternal fear and children's outdoor play. We classified children into racial/ethnic categories: Non-Hispanic White (reference), Non-Hispanic Black, and Hispanic/Other (only about 100 respondents were of "Other" race), and controlled for the child's age in months, child's gender (1 = male), whether the mother reported the child to be in fair or poor health, and whether she reported herself to be in fair or poor health. We controlled for mothers' educational attainment (when the child was born) with a set of indicators for 'did not complete high school' (reference group), 'completed high school,' and 'some college or more,' mother's age, and the mother's cognitive ability (from the Similarities subset of the Weschler Adult Intelligence Scale Revised

(WAIS-R) (Wechsler 1981). We included measures for mother's employment, with 'not employed outside the home' as the reference category, compared to 'full-time' and 'part-time' work. We also included a continuous measure of the income-to-needs ratio for the household (also the income-to-needs ratio squared as indicated below), and an indicator for whether the family received TANF in the last year. The family structure indicators are based on the three- and five-year surveys, and report the mother's current relationship with a partner (which could be the child's biological or social father) – married, cohabiting, or single; as well as her relationship instability – entering or exiting a romantic relationship over the past two years, because we believed relationship instability might influence her mental health and sense of fear. Thus, we compare mothers in a stable marital relationship to those who were 'stable cohabiters,' 'stable singles,' 'entered a relationship' or 'exited a relationship.' As an addition measure of family structure, we include an indicator for whether the mother's mother (the child's grandmother) lives in the household (1=grandmother in household).

Maternal Mental Health and Social Support

Because we believe that fear may be related to mothers' mental health, we also included an indicator for whether the mother is likely clinically depressed, an indicator based on the CIDI-SF (Kessler et al., 1998). In addition, we include a parenting stress index score – comprised of four questions which ask mothers about the extent of their agreement with statements about the difficulties of parenting. To create the index, we summed responses to the scale, with higher values representing higher parenting stress. Finally, we include an indicator for whether the mother has ever reported (throughout the waves of the study) experiencing intimate partner violence. As rough measures of the degree of social support a mother experiences, we include indicators for whether the mother has one or fewer close friends; and whether a mother has high

instrumental support (the ability to borrow money, depend on someone for emergency childcare, and provide a place to live if necessary).

Residential Context Measures

The first set of residential context measures include (1) whether the family lived in public housing, (2) number of residents in the household, and (3) whether the family moved between the three-year and five-year surveys. We also included a neighborhood poverty measure to control for tract-level differences in neighborhood poverty, as well as a measure of the proportion of the population in the Census tract who were African-American. Both of these measures were standardized in the models. The Census tract is the smallest residential area we have in our data, although we recognize that Census block data might have been preferable. Correlations for Census tract and block measures, however, are generally very high (Diez-Roux et al., 2001), and we also presume that the influence of contextual poverty on maternal fear and children's outdoor play may extend beyond the immediate environment of the home. Very few tracts represented in the sample have more than two respondents who reside there (just 10%). Thus, the poverty and racial composition measures are broad representations of the neighborhood and are not utilized in a multilevel framework. To account for the fact that nearly half the sample has moved since the three-year survey, we included an indicator for whether the family has moved in the last two years in all the models along with the poverty measure. Unfortunately, we do not have detailed, longitudinal residential information for each family. We do ask, at each wave, how many times the family has moved since the last interview. Using this information, we also created a variable which indicated how many times the family had moved in the last four years, and included it in our models. This measure of residential instability was never significant in any of our models, so we instead used the simple measure of whether the

family moved in the past two years.

To measure neighborhood collective efficacy, we used a slightly modified version of the neighborhood social environment measures in the Project on Human Development in Chicago Neighborhoods (PHDCN) Community Survey Questionnaire (Earls, Brooks-Gunn, Raudenbush, & Sampson 2002). Ten items assessing the mother's perception of neighborhood cohesion were summed to create the scale (Chronbach's alpha = 0.86). There were two types of questions. The first five questions gauged how likely the mother thought that neighbors would intervene in certain situations, such as "If children were skipping school and hanging out on the street." Mothers chose one of four responses; from "very likely" to "very unlikely." The second five questions asked about how cohesive mothers felt their neighborhoods were, such as, "People around here are willing to help their neighbors." Mothers chose one of four responses, ranging from "strongly agree" to "strongly disagree." The collective efficacy score was created by averaging a mother's responses to all ten questions, and then dividing the measure into tertiles, for 'high collective efficacy' (the reference group), 'medium collective efficacy,' and 'low collective efficacy.' Unfortunately, this measure of collective efficacy is only available at the five-year survey, so we are unable to account for her perceptions of collective efficacy at the three-year wave.

Finally, we include a measure of a three-year average (2002-2004) of the violent crime rate for each city. Ideally, we would have crime rate data at the zip code level or below, but this data is not available for every city. This information is from the FBI's Uniform Crime Reports for each of the twenty cities.

Missing data for the covariates is generally low; with the exception of 155 mothers who were missing Census tract information necessary to link those families with data on

neighborhood poverty and racial composition. All missing data (including that for mothers missing Census tracts) was imputed using a regression-based approach which predicted values for covariates based on socioeconomic status, race, mother's age, her work status, and family structure. The few mothers missing on the outcome measure were dropped from the sample.

Statistical Analysis

As our 'maternal fear' outcome measure is dichotomous, we utilize logistic regression models to test our hypotheses. We use stepwise models to assess the independent associations between our covariates of interest and our outcome; as well as to assess the relative contribution of each set of covariates to decreasing the observed racial/ethnic difference in maternal fear. To account for unobserved city characteristics which may influence maternal fear, we include city fixed-effects in all models. In the full paper, we also plan to assess interactions between neighborhood and household characteristics and race.

Results

Table 1 presents means for each variable as well as results of bivariate tests comparing the difference in means between racial/ethnic groups. In the full sample, 16% of mothers report being fearful of their child playing outside due to violence; but there are very large racial/ethnic differences in maternal fear, such that 21% of black mothers are fearful, as are 16% of Hispanic mothers, compared to just 5% of white mothers. Note that black and Hispanic mothers are younger, on average, compared to white mothers; they also report levels of education and have lower income-to-poverty ratios. Black mothers are most likely to receive TANF (25%); black mothers are also most likely to work full-time. Overall, 27% of the sample are in stable, married relationships, although there are large racial/ethnic differences, such that 51% of whites, but just 14% of blacks and 31% of Hispanics fall into this category. Black and Hispanic mothers are

more likely to live in households with five or more residents, and to live in public housing. There is a good deal of residential instability in the sample, with approximately half of all respondents having moved at least once in the past two years.

In terms of mental health and stress, we see relatively high levels overall of the likelihood of depression in the sample, with 20% of mothers likely depressed; but we do not see large racial/ethnic difference in the prevalence of depression, parental stress, or intimate partner violence. We do see interesting racial/ethnic group differences in the social support measures. Black and Hispanic mothers are much more likely than white mothers to report just one (or no) close friends; and they are less likely to have high instrumental support, although most mothers report having access to support resources if necessary (78% overall).

Large differences emerge between racial/ethnic groups when we turn to looking at neighborhood differences, both subjective and objective. White mothers are much more likely to report living in neighborhoods with high collective efficacy; the model category for both black and Hispanic mothers is low collective efficacy. White mothers, on average, live in neighborhoods with just 9% of residents in poverty; in contrast, black mothers live in neighborhoods with 23% of residents in poverty; and Hispanic mothers in neighborhoods with 28% of residents in poverty, on average. Black mothers live in neighborhoods which are, on average, 66% black, compared to white mothers whose neighborhoods are 11% black, and Hispanic mothers, whose neighborhoods are 17% black.

Table 2 presents results from logistic regression models predicting maternal fear, in the form of odds ratios. In Model 1, we first notice large racial/ethnic differences in the odds of a mother being fearful of her child playing outdoors – blacks have 3.29 times the odds of white mothers of being fearful; and Hispanic mothers have 2.33 times the odds of white mothers of

being fearful, adjusting for a variety of child and mother background factors. We also see that a mother has higher odds of being fearful if she reports herself as being in fair or poor health, if she receives TANF, and if she has entered a new relationship in the past two years (relative to stable married mothers). We see that the odds of being fearful decrease as the income-to-poverty ratio increases; if a mother has some college education or more; if she has a higher cognitive ability score; and if she works full- or part-time.

In Model 2, we add the household characteristics measures, and see a slight mediation of the racial/ethnic differences in maternal fear. We see that living in public housing is associated with higher odds of being fearful; while having moved is associated with lower odds of being fearful. In Model 3, we add the mental health and domestic violence measures. Although we do not see evidence of further mediation of the racial/ethnic differences, we do see that if a mother is likely depressed her odds of being fearful are 37% higher, and that higher levels of stress and experiencing domestic violence are associated with higher odds of being fearful. Thus, although the mental health and domestic violence measures are important predictors of maternal fear, they do not explain the racial/ethnic differences in maternal fear.

Model 4 adds the social support measures to the model. Here, we see additional evidence of mediation of the racial/ethnic differences – indicating that a small portion of the racial/ethnic differences in maternal fear are attributable to differences in social support. If a mother has only one or no close friends, her odds of fear are 41% higher than mothers who have more close friends. In addition, if a mother reports high instrumental support, her odds of being fearful are lower. In Model 5, which adds the mothers' perceptions of neighborhood collective efficacy to the model, we see a larger mediation effect on the racial/ethnic differences. Mothers living in what they perceive as low collective efficacy neighborhoods have more than 8 times the odds of

being fearful as mothers in high collective efficacy neighborhoods; and mothers in medium collective efficacy neighborhoods have nearly three times the odds of fear compared to mothers in high collective efficacy neighborhoods. Moreover, these differences in collective efficacy are responsible for a portion of the racial/ethnic differences in maternal fear.

In Model 6 we control for the neighborhood poverty and racial composition (in the form of % black) measures. The measures are standardized to ease interpretation. Mothers living in neighborhoods where the proportion of residents living in poverty is one standard deviation above the mean have 35% higher odds of being fearful. Similarly, mothers living in neighborhoods where the proportion of black residents is one standard deviation above the mean have 24% higher odds of fear. We tested interactions between maternal race/ethnicity and these neighborhood demographic measures, and found no significant interactions. That is, both neighborhood poverty and neighborhood racial composition are associated with maternal fear in the same ways for mothers of all three racial/ethnic groups. However, also note a large amount of mediation of the racial/ethnic differences in maternal fear, indicating that accounting for the propensity of blacks and Hispanics to live in poorer, more heavily black neighborhoods, reduces the gaps between whites and blacks, and whites and Hispanics, in maternal fear.

Finally, in Model 7 we include all our covariates in the full model, along with the city-level violent crime rate. In this final model, we see that the joint contribution of all our control measures nullifies the significant white-black difference, although the odds ratio remains above one. The significant white-Hispanic difference in maternal fear remains, although it is reduced to its smallest level. For the most part, the covariates retain their magnitude when we control for all the other measures, with the exception of domestic violence and the social support measures,

which lose significance in the full model. Finally, note that the city-level violent crime rate is not a significant predictor of maternal fear.

Discussion (in progress!)

*Neighborhood segregation-both by race and income—appears to explain much of the relationship between maternal race/ethnicity and fear. Black moms are more likely to live in neighborhoods with higher proportions of black residents, as well as in neighborhoods with low levels of collective efficacy, and these two neighborhood factors are significant predictors of maternal fear of children's outdoor play.

*Also, crime rates, at least when measured at the city-level, *do not* significantly predict maternal fears. This has important policy implications as it suggests that efforts to increase outdoor play among young children should concentrate on community building and collective efficacy rather than strictly focusing on law enforcement. It is important to note, however, that finer-grained crime data (e.g. for block groups) might show associations with maternal fear, although most studies show that it is perceptions of crime and fear which influence behaviors, not actual crime rates.

*Mothers who moved between waves of the survey are consistently less likely to report fear, which suggests that these families are moving to better—not worse—neighborhoods.

*Being employed full-time is also consistently associated with a lower likelihood of reporting fear. This finding is somewhat counterintuitive, as working mothers are unable to directly supervise their children when they are at work; however, we speculate that employed mothers are likely to be in better mental health than non-employed mothers; and may be able to live in better neighborhoods.

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Table 1: Descriptive Statistics, FFCWS Sample, by Race/Ethnicity

	Full Sample	Whites	Blacks	Hispanics
Mother is fearful of her child playing outside	0.16	0.05	0.21***	0.16***
Demographics				
Race (Ref: White)	0.22			
Black	0.49	--	--	--
Hispanic	0.29			
Child is male	0.52	0.53	0.52	0.51
Child's Age (months)	35.6 (2.5)	34.8 (2.1)	35.9 (2.5)***	35.7 (2.6)***
Child has fair/poor health	0.02	0.01	0.02*	0.03**
Mom has fair/poor health	0.13	0.10	0.12	0.17***
Mother's Age (years)	28.1 (6.0)	30.1 (6.5)	27.4 (5.7)***	27.8 (5.9)***
Socioeconomic Status				
Household Inc/Poverty Threshold	1.87 (1.91)	3.1 (2.5)	1.5 (1.5)***	1.6 (1.6)***
Household receives TANF	0.19	0.09	0.25***	0.14**
Mother's Education (ref: Less than HS)	0.33	0.18	0.32***	0.46***
HS	0.31	0.25	0.37***	0.25
College	0.36	0.57	0.31***	0.29***
Mother's Cog. Ability	6.8 (2.6)	8.0 (2.4)	6.6 (2.4)***	6.1 (2.8)***
Mother's Employment Status (ref: Not working)	0.42	0.41	0.40	0.47
Full-time	0.36	0.31	0.40***	0.32
Part-time	0.22	0.28	0.20***	0.21**
Family Support				
Grandmother Present in household	0.12	0.08	0.12**	0.15***
Mother's relationship status (Ref: Stable marital relationship)	0.27	0.51	0.14***	0.31***
Single (stable)	0.34	0.19	0.45***	0.26**
Entering a relationship	0.06	0.04	0.06	0.07**
Exiting a relationship	0.22	0.18	0.25***	0.20
Cohabiting (stable)	0.11	0.08	0.10	0.16***
Household Characteristics				
More than four residents	0.46	0.40	0.45*	0.51***
Family lives in public housing	0.13	0.04	0.18***	0.11***
Moved between three and five year surveys	0.47	0.45	0.50*	0.45
Maternal Mental Health and Domestic Violence				
Mother likely depressed at three-year survey	0.20	0.20	0.22	0.17
Mother's stress index score at three-year survey	8.9 (2.7)	8.8 (2.4)	9.0 (2.7)*	8.9 (2.8)
Ever experienced domestic violence	0.03	0.03	0.02	0.03
Social Support				
Mother has 0 or 1 close friends	0.18	0.09	0.22***	0.20***
More has high instrumental support	0.78	0.88	0.73***	0.78***
Neighborhood Collective Efficacy (ref: High CE)				
High collective efficacy	0.33	0.48	0.29***	0.28***
Medium collective efficacy	0.32	0.30	0.32	0.33
Low collective efficacy	0.35	0.22	0.39***	0.39***
Neighborhood Characteristics				
% households in poverty	0.18	0.09	0.23***	0.18***
% black	0.40	0.11	0.66***	0.17***
City-Level Violent Crime Rate	1012.6 (393.5)	968.7 (328.4)	1152.1 (389.7)***	811.0 (345.6)***
N	3448	736	1,698	1,014

NOTE: *p ≤ .05, **p ≤ .01, ***p ≤ .001 (two-tailed test).

Table 2. Odds Ratios, Predicting Maternal Fear

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Demographics							
Race (Ref: White)							
Black	3.29***	3.11***	3.11***	2.99***	2.69***	1.88*	1.55
Hispanic	2.33**	2.26**	2.30***	2.22**	1.87**	1.97**	1.64*
Child is male	0.86#	0.86*	0.86*	0.85*	0.87	0.84*	0.85#
Child's Age (months)	1.00	1.00	1.00	1.00	1.01	1.01	1.02
Child has fair/poor health	1.18	1.19	1.09	1.09	1.12	1.12	0.95
Mom has fair/poor health	1.39***	1.43***	1.27**	1.37***	1.29**	1.46***	1.21*
Mother's Age (years)	1.02#	1.01	1.01	1.01	1.01	1.01	1.01
Socioeconomic Status							
Household Inc/Poverty Threshold	0.85***	0.87***	0.88**	0.89***	0.92#	0.91**	0.97
Household receives TANF	1.50**	1.46**	1.45**	1.42**	1.39**	1.40**	1.32*
Mother's Education							
HS	0.78	0.79	0.80	0.81	0.81	0.79	0.82
College	0.76*	0.79#	0.79#	0.82	0.77*	0.84	0.85
Mother's Cog. Ability	0.96*	0.96*	0.96*	0.97	0.98	0.96*	0.98
Mother's Employment Status							
Full-time	0.64***	0.65***	0.68**	0.67**	0.66**	0.65**	0.69**
Part-time	0.79*	0.80*	0.82*	0.81#	0.79*	0.82#	0.83
Family Support							
Grandmother Present in household	0.83	0.82	0.83	0.83	0.89	0.85	0.94
Mother's relationship status (Ref: Stable marital relationship)							
Single (stable)	1.23	1.27	1.28	1.21	1.30	1.15	1.15
Entering a relationship	1.65*	1.68*	1.68*	1.63*	1.76**	1.67*	1.76**
Exiting a relationship	1.35#	1.40#	1.41#	1.34	1.42#	1.31	1.35
In a stable cohabitating relationship	1.33#	1.32#	1.35#	1.30	1.33	1.19	1.25
Household Characteristics							
More than four residents		1.14	1.15	1.13	1.18#	1.12	1.17#
Family lives in public housing		1.49**	1.48***	1.52***	1.40***	1.33*	1.26#
Moved between three and five year surveys		0.83*	0.81*	0.82*	0.79**	0.84*	0.80**
Maternal Mental Health and Domestic Violence							
Mother likely depressed at three-year survey			1.37**				1.32*
Mother's stress index score at three-year survey			1.05*				1.03
Ever experienced domestic violence			1.57*				1.25
Social Support							
Mother has 0 or 1 close friends				1.41*			1.21
More has high instrumental support				0.71***			0.85
Neighborhood Collective Efficacy (ref: High CE)							
Medium collective efficacy					2.78***		2.70***
Low collective efficacy					8.56***		8.00***
Neighborhood Characteristics							
% households in poverty (standardized)						1.35***	1.34***
% black (standardized)						1.24*	1.25*
City-Level Violent Crime Rate (standardized)							1.02
R^2	.0857	.0911	.0979	.0982	.1759	.1097	.1977
Sample Size	3448	3448	3448	3448	3448	3448	3448

NOTE: #p≤.10, *p ≤ .05, **p ≤ .01, ***p ≤ .001 (two-tailed test).