

The Fragile Families and Child Wellbeing Study changed its name to The Future of Families and Child Wellbeing Study (FFCWS). Due to the issue date of this document, FFCWS will be referenced by its former name. Any further reference to FFCWS should kindly observe this name change.

Vicarious and Contingent Consequences of Adolescent Police Exposure *

Kristin Turney
Department of Sociology
University of California, Irvine

October 2019

WP19-12-FF

* Direct correspondence to Kristin Turney, University of California, Irvine, 3151 Social Science Plaza, Irvine, CA 92697-5100. Direct email to kristin.turney@uci.edu. This research was supported by the William T. Grant Foundation. Funding for the Fragile Families and Child Wellbeing Study was provided by the NICHD through grants R01HD36916, R01HD39135, and R01HD40421, as well as a consortium of private foundations (see <http://www.fragilefamilies.princeton.edu/funders.asp> for the complete list). The author thanks Amanda Geller, Jessica Hardie, Naomi Sugie, Bryan Sykes, and Anita Zuberi for feedback on earlier versions of this paper. This paper also benefitted from the feedback of participants at presentations at UCLA, University of Texas-Austin, and Yale University.

ABSTRACT

Police stops are a pervasive form of criminal justice contact among adolescents that have adverse repercussions for mental health. Yet the mental health consequences of adolescent police stops likely proliferate, vicariously, to parents of adolescents exposed to this form of criminal justice contact. In this article, I conceptualize adolescent police stops as a stressor, drawing on the stress process perspective to examine how and under what conditions adolescent police stops damage the mental health of adolescents' mothers. The results, based on data from the Fragile Families and Child Wellbeing Study, suggest three conclusions. First, the mental health consequences of adolescent police stops proliferate vicariously, increasing depression and anxiety among adolescents' mothers. This relationship persists across a series of modeling strategies that progressively adjust for observed confounders, including adolescent characteristics including delinquency, substance use, and other forms of criminal justice contact. Second, the relationship between adolescent police stops and mothers' mental health is contingent, especially concentrated among mothers with prior exposure to the criminal justice system (either via themselves or their adolescents' fathers). Third, mothers' emotional support buffers the relationship between adolescent police stops and mothers' mental health. Taken together, this research highlights the role of police exposure as a stressor with both vicarious and contingent consequences and, accordingly, documents the expansive and proliferating repercussions of police contact.

The criminal justice system—with its attendant consequences for individuals and families—is a critical engine of social stratification in the United States (Alexander 2010; Kirk and Wakefield 2018). Its precipitous growth over the past half century has meant that a considerable number of individuals have some exposure to the criminal justice system. Police stops are the most common form of exposure, with an estimated 31 million individuals experiencing a stop or another form of involuntary contact annually (Langton and Durose 2016). Police stops are especially common experiences among individuals of color and individuals living in economically disadvantaged and highly surveilled neighborhoods (Langton and Durose 2016; Rios 2011; Stuart 2016).

Despite being a pervasive and unequally distributed form of criminal justice contact with detrimental mental health consequences (Baćak and Nowotny 2018; Geller, Fagan, Tyler, and Link, 2014; Sewell, Jefferson, and Lee 2016), virtually no social science research examines the vicarious consequences of police contact (though see Geller 2018a; also see Swarns 2016 for a compelling media account). It is doubtful the deleterious mental health consequences of this form of criminal justice contact end with injuries for individuals who personally experience police stops. Instead, these consequences likely proliferate, vicariously, to the family members of those exposed to police contact. In particular, given the interdependency and close bonds between parents and children, police stops experienced by adolescents may damage mental health among parents of these adolescents (Elder, Johnson, and Crosnoe 2003). The inattention to the vicarious mental health consequences of police stops is a substantial oversight, particularly given the consistent and emerging evidence that criminal justice contact (generally measured as incarceration) has deleterious consequences for the health of those experiencing the contact (Massoglia 2015) and the related evidence that the deleterious consequences of criminal justice

contact (again, generally measured as incarceration) proliferates throughout families (Comfort 2008; Western 2018).

The stress process perspective, which posits that stressors can have persistent health consequences, provides a theoretical lens for understanding the vicarious repercussions of adolescent police stops for mothers' mental health (Avison 2010; Pearlin 1989; Pearlin, Menaghan, Lieberman, and Mullan 1981). Three aspects of the stress process perspective are especially relevant. First, stressors are contagious across individuals, with stressors experienced by one individual proliferating to impair mental health among those connected to them (Barr, Simons, Simons, Beach, and Philibert 2018; Pearlin, Aneshensel, and Leblanc 1997). Second, the consequences of stressors are contingent, with deleterious mental health consequences concentrated among groups most commonly exposed to the stressor (Pearlin 1989). Third, social support buffers the deleterious mental health consequences of stressors (Cohen and Wills 1985; Thoits 1982). Taken together, the stress process perspective suggests the stressor of adolescent police stops—which are generally involuntary and can involve invasive searches, emotional degradation, and physical violence—can have both vicarious and contingent consequences for mental health among adolescents' mothers (Rios 2011; Stuart 2016).

In this article, I advance scholarship on the criminal justice system, families, and health by examining the relationship between mothers' reports of adolescent police contact and mothers' mental health, measured by depression and anxiety. I use data from the Fragile Families and Child Wellbeing Study, a cohort of children born in urban areas around the turn of the century and followed for 15 years, and a series of modeling strategies that account for observed differences between mothers who do and do not report their adolescent experienced police contact. First, I examine the vicarious relationship between adolescent police stops and mothers'

mental health, accounting for confounders (e.g., neighborhood conditions, adolescent behavior and delinquency, adolescent impulsivity, mothers' prior exposure to the criminal justice system) and potentially endogenous characteristics of adolescents such as other forms of criminal justice contact (e.g., arrest, incarceration). Second, I investigate contingencies in the relationship between adolescent police stops and mothers' mental health by mothers' prior exposure to the criminal justice system. Third, I examine the role of mothers' emotional support in buffering the deleterious mental health consequences of adolescent police stops. This research provides one of the first accountings of police exposure as a stressor with vicarious and contingent consequences. This research also provides novel insight into the expansive repercussions of police contact for the young people entangled in the criminal justice system and for their families, underscoring how the criminal justice system contributes to health inequalities.

BACKGROUND

The stress process perspective, which documents the unequal distribution of stressors across the population and the damaging consequences of stressors for health, is a valuable theoretical framework for understanding the vicarious and contingent mental health consequences of adolescent police stops (Pearlin 1989; Pearlin et al. 1981). Indeed, being stopped by the police is a distinctive stressor and, among adolescents, can be considered an adverse childhood experience (Feld 2013; Geller 2018b). Police stops are a form of legal social control that are often involuntary. They can be traumatic and upsetting. They can involve invasive searches of one's body or belongings, emotional degradation, and physical violence (Rios 2011; Shedd 2015; Stuart 2016). The adversities associated with police exposure are likely especially remarkable for adolescents, who may be experiencing criminal justice contact for the first time (Feld 2013;

Shedd 2015). Indeed, among adolescents, about one-third of police stops involve searches and one-quarter involve frisks (Geller 2018b). Adolescents also report harsh language, being handcuffed, physical force, and racial slurs as part of police stops (Geller 2018b). Given these adversities, it is perhaps unsurprising that research documents the deleterious mental health consequences of police exposure. Individuals stopped by the police, compared to their counterparts, have a greater likelihood of mental health conditions such as depression, anxiety, powerlessness, and post-traumatic stress disorder (Baćak and Nowotny 2018; Geller 2018a; Geller, Fagan, Tyler, and Link 2014; Sewell, Jefferson, and Lee 2016).

The stressor of a police stop likely proliferates from the adolescents exposed to this criminal justice contact to the individuals connected to them, particularly their mothers. Three aspects of the stress process perspective are especially prescient in understanding the relationship between adolescent police stops and mothers' mental health: (1) stressors can proliferate from one individual to another, via a process called stress contagion, which can lead to adverse mental health among those vicariously exposed to the stressor; (2) the mental health consequences of stressors are concentrated among social groups most vulnerable to exposure to the stressor; and (3) social support may buffer the relationship between stressors and mental health (Pearlin 1989; Pearlin and Bierman 2013). I elaborate on each of these three points below, highlighting the role of adolescent police stops as a stressor.¹

Adolescent Police Stops as a Form of Stress Contagion

First, stress contagion, a fundamental aspect of the stress process perspective, provides a framework for understanding the relationship between mothers' reports of adolescent police stops and mothers' mental health, net of characteristics that make adolescents more susceptible

to being stopped by the police. Stress contagion, sometimes called *stress proliferation* or *stress transfer*, is the notion that stressors experienced by one individual can have reverberating consequences across individuals, affecting not only the health of the person exposed to the stressor but also affecting the health of those connected to them (Barr et al. 2018; Pearlin, Schieman, Fazio, and Meersman 2005). This is consistent with the life course perspective that highlights the interdependency, or linked lives, of individuals (Elder et al. 2003). Stress can reverberate within and between generations—from children to parents (e.g., Barr et al. 2018; Green, Ensminger, Robertson, and Juon 2006), from parents to children (e.g., Foster and Hagan 2013), from one romantic partner to another (e.g., Wildeman, Schnittker, and Turney 2012), and from individuals to their caregivers (e.g., Pearlin et al. 1997). Given the strong bonds between children and parents, stress contagion may be especially pronounced across these two groups (Thoits 2010; Wethington 2000) and, indeed, a large literature shows that *parental* criminal justice contact (generally measured as incarceration) has deleterious health consequences for children (Foster and Hagan 2013; though see Giordano, Copp, Manning, and Longmore 2019).

Therefore, stress contagion suggests an adolescent police stop is a stressor with reverberating health consequences for the mothers of adolescents exposed to this form of criminal justice contact. Adolescent police stops may have immediate consequences for mothers' mental health. Some mothers may witness the stop. Other mothers may experience trauma upon learning about the stop. Mothers may be distressed by their adolescents' report of the stop and its associated invasiveness, emotional degradation, and physical harm (Brunson and Weitzer 2009; Shedd 2015). Mothers may also suspect that their adolescent was unjustly stopped by the police, potentially the victim of racial profiling, or they may blame themselves for the police stop

(Sewell and Jefferson 2016). All of these immediate reactions associated with the police stop may increase depression and anxiety among mothers.

Additionally, the vicarious consequences of adolescent police stops may linger. Mothers of adolescents stopped by the police may experience anticipatory stress (Pearlin and Bierman 2013). This anticipatory stress may be related to uncertainty about whether their adolescent will experience future criminal justice contact, either via additional police stops or via sanctions stemming from police stops (such as an arrest, conviction, or incarceration). This anticipatory stress may also extend beyond their uncertainty about future criminal justice contact, as mothers likely experience ambiguity about how the stop will affect aspects of their adolescents' future, including their attitudes toward the police, their employment prospects, their political participation, their engagement with institutions, and their physical and mental health (Brayne 2014; Geller and Fagan 2019; Sewell and Jefferson 2016). Indeed, anticipatory stress, particularly anticipatory stress stemming from criminal justice contact, can engender depression and anxiety (Pearlin and Bierman 2013; Sugie and Turney 2017).

There may be other non-immediate consequences of adolescent police stops that alter mothers' mental health. Mothers and adolescents have a shared fate and, accordingly, both mothers and adolescents may adjust their roles in the wake of an adolescent police stop (Wethington, 2000). For example, mothers may change their parenting behaviors after the police stop. They may more closely monitor their adolescent, instruct their adolescent to practice vigilance, or prepare their adolescent for future interactions with the police (Lee and Hicken 2016; Stuart 2016). Adolescents may also experience resultant role changes stemming from the police stop. They may become withdrawn or disengaged, they may desist or escalate their involvement in criminal activity, or they may become increasingly cynical of the criminal justice

system. These adjusting of roles, by both mothers and adolescents, may increase mothers' depression and anxiety.

Contingencies in the Consequences of Adolescent Police Stops

Second, the stress process perspective posits that the health consequences of stressors are not uniform across social groups. Instead, the consequences of stressors are contingent on one's social position, with groups most commonly exposed to a stressor experiencing the greatest consequences of this stressor (Pearlin 1989). This aspect of the stress process perspective has been primarily used to understand the relationship between stressors and health among individuals exposed to the stressor, not the vicarious contagion of stressors across individuals, but it is likely that stress contagion has similarly contingent consequences for health.

In particular, the relationship between adolescent police stops and mothers' mental health may vary across mothers' prior exposure to the criminal justice system. Mothers' prior exposure to the criminal justice system—including their own police stops and incarceration as well as police stops and incarceration of their adolescents' fathers—is a form of social disadvantage that has not been previously considered as a moderator in the stress process perspective. Given that adolescent police stops are more common when mothers have prior exposure to the criminal justice system themselves (Rodriguez, Smith, and Zatz 2009), the consequences of adolescent police stops may be concentrated among mothers with prior exposure to the criminal justice system. Mothers with their own exposure to the criminal justice system may have more accurate and comprehensive knowledge about what the stop could entail (including emotional degradation, racial slurs, or physical violence). These mothers may also have a heightened understanding of the potential for the stop to affect the life course of their adolescent.

Additionally, mothers with prior exposure to the criminal justice system experience additional tensions such as economic and family instability (Turney and Wildeman 2018). It is likely that an adolescent police stop compounds and intensifies these already existing tensions, exacerbating depression and anxiety among mothers. Alternatively, it is possible that the consequences of adolescent police stop are concentrated among mothers with no exposure to the criminal justice system, as unanticipated stressors can be especially consequential (Eaton 1978).

Emotional Support as a Buffer Against the Consequences of Adolescent Police Stops

Third, the stress process perspective posits that social support buffers the relationship between stressors and health (Pearlin 1989; Thoits 1982, 2010). This aspect of the stress process perspective, similar to the aspect of the stress process perspective highlighting contingencies related to social position, has been primarily applied to understanding the buffering role of social support for individuals experiencing stressors (and not those connected to those experiencing stressors). However, similar buffering processes likely operate with respect to contagious stressors. In particular, the relationship between adolescent police stops and mothers' mental health may be conditioned by mothers' social support.

Social support is a coping resource that can attenuate the deleterious consequences of stressors for mental health (Pearlin and Schooler 1978). Emotional support, even if simply perceived available (and not necessarily activated), is a particularly important buffering resource (Pearlin et al. 1981; Thoits 2010; Wethington and Kessler 1986). Mothers with emotional support, compared to mothers without emotional support, may experience fewer mental health consequences resulting from their adolescent's police stop. Emotional support may be efficacious by providing mothers an outlet for discussing their adolescent's police contact, the

resultant (actual or anticipated) consequences of the police stop for their adolescent, and the ensuing consequences of the police stop for themselves. This emotional support may reduce depression and anxiety among mothers who vicariously experience this stressor.

The Interconnectedness and Embeddedness of Stressors

The stress process perspective highlights the interconnectedness and embeddedness of stressors (Pearlin 1989). Accordingly, though adolescent police stops may aggravate mental health among mothers, an alternative possibility is that observed associations between adolescent police stops and mothers' mental health results not from the police contact but instead from spurious characteristics. Police contact is not randomly distributed across the population of adolescents. Instead, it is concentrated among boys, among racial/ethnic minorities, and among adolescents residing in economically disadvantaged neighborhoods (Geller 2018b). There is also a strong intergenerational component to police contact (Rodriguez et al. 2009; Thornberry 2005). Other predictors of police contact include adolescent behavior and delinquency, impulsivity, substance use, and other forms of criminal justice contact including arrest and incarceration. Given the non-random distribution of adolescent police exposure, analyses must adjust for characteristics that may precipitate adolescent police stops.

DATA, MEASURES, AND ANALYTIC STRATEGY

Data

I use data from the Fragile Families and Child Wellbeing Study to examine the vicarious and contingent consequences of adolescent police stops for mothers' mental health. These longitudinal data comprise a cohort of 4,898 children born to mostly unmarried parents in urban

areas in 1998-1999 (Reichman, Teitler, Garfinkel, and McLanahan 2001). Children's mothers and fathers completed an in-person interview when their children were born. Parents completed subsequent telephone interviews when their children were about 1, 3, 5, 9, and 15 years old (with only the child's primary caregiver, usually the child's mother, being interviewed at this last wave where the outcome variables are measured). Children completed interviews when they were 9 and 15 years old.

These data provide an unparalleled opportunity to examine the intergenerational consequences of criminal justice contact and, in particular, the relationship between adolescent police stops and mothers' mental health. First, these data were collected during an era of proactive policing, a period where adolescents are commonly exposed to police contact (Kubrin, Messner, Deane, McGeever, and Stuckey 2010). Second, they include information about adolescent police stops and time-varying measures of mothers' mental health (allowing for an examination of changes in mothers' depression and anxiety over time). Third, they contain extensive information about factors associated with adolescent police stops. Fourth, they include a relatively large sample of adolescents, making it possible to investigate contingencies in the relationship between adolescent police stops and mothers' mental health.

The analytic sample includes 3,063 observations. I exclude the 1,317 observations in which the primary caregiver did not participate in the 15-year survey and the additional 434 observations in which the primary caregiver respondent is not the adolescent's biological mother.² I also exclude the additional 83 observations missing data on either of the dependent variables, mothers' depression and anxiety. There are some small but statistically significant baseline differences between the full and analytic samples. Mothers in the analytic sample are more likely to be Black (51% compared to 48%), less likely to be Hispanic (25% compared to

27%), and less likely to be born outside the United States (14% compared to 17%). Mothers in the analytic sample are also more highly educated, as they are less likely than mothers in the full sample to have less than a high school diploma (31% compared to 35%). Mothers in the analytic and full samples are similarly likely to report depression and anxiety at the one-year survey.

Measures

Mothers' Mental Health. The outcome variables include two related yet distinct indicators of mothers' mental health, Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD), both measured at the 15-year survey. Mothers were asked questions from the Composite International Diagnostic Interview Short Form (CIDI-SF), Version 1.0, November 1998, a standardized instrument that is commonly used in large-scale surveys to measure DSM-IV diagnoses (Kessler, Andrews, Mroczek, Ustun, and Wittchen 1998). The skip patterns in both measures of MDD and GAD necessitate binary outcomes as opposed to continuous outcomes.

First, mothers were asked a series of questions designed to measure MDD. Mothers were first asked whether, at some time during the previous year, they had feelings of depression or were unable to enjoy things they normally found pleasurable. Those who experienced at least one of these two conditions most of the day, every day, for a two-week period reported on an seven additional symptoms: losing interest in things, feeling tired, experiencing a weight change of at least 10 pounds, having trouble sleeping, having trouble concentrating, feeling worthless, and thinking about death. Those who answered affirmatively to at least one of the stem questions and three of the additional questions are considered as likely having MDD in the previous year (Kessler et al. 1998).

Second, mothers were asked a series of questions that measure GAD. Mothers were first asked whether, at some point in the previous year, they had a period of feeling tense, worried, or anxious that lasted at least six months. Mothers who responded affirmatively to this question were then asked additional questions about their symptoms. They are considered as likely having GAD in the previous year if they answered affirmatively to the stem question and endorsed three additional criteria. The first criterion includes reporting the worry was excessive, lasting more days than not, and involving more than one thing. The second criterion includes reporting the worry was characterized by a lack of control. The third criterion includes reporting at least three of the following physiological symptoms: restless; keyed up or on edge; easily tired; difficulty keeping your mind on what you were doing; more irritable than usual; tense, sore, or aching muscles; and have trouble falling asleep or staying asleep (Kessler et al. 1998).

Adolescent Police Stops. The primary explanatory variable is a binary indicator that the mother reported the adolescent experienced a police stop. Mothers were asked the following: “Has {YOUTH} ever been stopped by the police while on the street, at school, in a car, or some other place?” Adolescents were also asked to report on police stops and, in supplemental analyses (described below), I explore the consistency between mother- and adolescent-reported stops and examine the association between adolescent-reported stops and mothers’ mental health. However, the main analyses use mothers’ reports of adolescent police stops, as many of the proposed pathways linking adolescent police stops to mothers’ mental health presume mothers’ knowledge of the stop (though certainly mothers may react to changes in their adolescent that stem from the stop, even if mothers are unaware of the source of these changes).

Additional analyses examine variation in adolescent police stops. First, adolescents were asked how many times they were stopped by the police (mean = 2.73, standard deviation = 3.82).

Second, adolescents reporting a police stop were asked if, during their most memorable police stop, the officer engaged in the following: (1) frisk or pat down; (2) search bags or pockets; (3) use harsh language; (4) use racial slurs; (5) threaten physical force; and (6) use physical force (mean = 1.16, standard deviation = 1.54).

Control Variables. The multivariate analyses adjust for mother, father, and adolescent characteristics associated with adolescent police stops and mothers' mental health. Time-invariant characteristics are measured at baseline. Characteristics that can change over time are measured at the nine-year survey unless otherwise noted (also see Table 1). Therefore, all control variables are measured prior to the measure of adolescent police stops.³

Demographic characteristics of mothers and fathers include the following: race/ethnicity (White [non-Hispanic], Black [non-Hispanic], Hispanic, other race [non-Hispanic]); foreign-born; age; and family structure in adolescence, a binary variable indicating the parent lived with both biological parents at age 15.

Family characteristics include the following: relationship status between the parents (married, cohabiting, no residential relationship); repartnering status; relationship quality between the parents, ranging from 1 (*poor*) to 5 (*excellent*); and number of children in the household.

Socioeconomic characteristics include the following: employment, a binary variable indicating the respondent worked for pay in the last week; income-to-poverty ratio, a continuous measure based on household composition and federal poverty guidelines; and material hardship, a sum of 11 types of difficulties making ends meet in the past year (see Appendix Table 1 for individual items that comprise this and other variables).

Health characteristics include the following: parenting stress, an average of responses to four statements; fair or overall health; heavy drinking, which indicates the parent reports having four or more drinks in one sitting in the past month; and illicit drug use, which indicates the parent reports using drugs without a doctor's prescription, in larger amounts than prescribed, or for a longer period than prescribed in the past month.

The multivariate analyses also adjust for neighborhood disadvantage, measured by four indicators of tract-level 2000 Census data that are summed together and standardized; neighborhood race/ethnic composition including percent White (non-Hispanic), percent Black (non-Hispanic), and percent Hispanic; neighborhood social control, an average of responses to five statements; and neighborhood social cohesion, also an average of responses to five statements.

The multivariate analyses adjust for additional parental characteristics that may be especially associated with adolescent police stops and mothers' mental health. Mothers' and fathers' cognitive skills is measured, at the three-year survey, by the Weschler Adult Intelligence Scale (Weschler 2001). Mothers' and fathers' impulsivity is measured with an abbreviated form of Dickman's (1990) impulsivity scale. Parental criminal justice contact is measured by mothers' police stops, which indicates the mother reported ever being stopped by the police but not picked up or arrested, constructed by combining responses to questions ascertained at the three-, five-, and nine-year surveys; fathers' police stops, constructed by combining responses to questions ascertained at the one-, three-, five-, and nine-year surveys; mothers' incarceration, which indicates the mother was incarcerated in jail or prison since the one-year survey, constructed using both parents' reports of her incarceration across waves; and fathers' incarceration, constructed similarly to mothers' incarceration. The multivariate analyses also adjust for lagged

indicators of mothers' mental health (with depression measured at the nine-year survey and anxiety measured at the three-year survey, the last wave it is available prior to the 15-year survey).

Finally, adolescent characteristics include the following: gender; age (in years) at the 15-year survey; low birth weight (less than 2,500 grams); impulsivity; and delinquency, measured by summing self-reports about ever participating in 17 delinquent activities from the "Things that You Have Done" scale (Maumary-Gremaud 2000).

Additional Control Variables Measured After Adolescent Stops. Ideally, all control variables would be measured prior to adolescent police stops. However, as some adolescent characteristics associated with both adolescent police stops and mothers' mental health are only ascertained at the 15-year survey, I adjust for these potential collider variables in some analyses. These variables include police exposure at school, which indicates a police officer is regularly stationed at the adolescent's school; smoking, which indicates the adolescent reports ever smoking an entire cigarette; drinking, which indicates the adolescent reports ever drinking alcohol more than one or two times without parents; drug use, which indicates the respondent reports ever using marijuana or another drug; peer delinquency, an average of responses to 11 items; and additional criminal justice contact, measured with two binary variables indicating the adolescent was ever arrested or incarcerated.

Mothers' Emotional Support. Some analyses examine variation in the relationship between adolescent police stops and mothers' mental health by mothers' emotional support, measured by an affirmative response to the following question at the 15-year survey: "Is there any special person you know that you feel very close with – someone you share confidences and feelings with; someone you can depend on?"

Analytic Strategy

The multivariate analyses proceed in three stages. First, I use logistic regression models to estimate mothers' mental health, measured by depression and anxiety, as a function of mothers' reports of adolescent police stops. The first model presents the unadjusted relationship. The second model adjusts for the mother, father, and adolescent characteristics described above, all of which are measured prior to adolescent police stops. The third model further adjusts for a lagged dependent variable, which estimates the relationship between adolescent police stops and mothers' mental health net of mothers' prior mental health. The fourth model further adjusts for potential collider variables, the seven adolescent characteristics described above that are only measured at the 15-year survey. Given that this model adjusts for characteristics that may stem from adolescent police stops, it provides a *conservative* estimate of the relationship between adolescent police stops and mothers' mental health. I also estimate mothers' mental health as a function of the number and intrusiveness of police stops.

Second, I examine contingencies in the relationship between mothers' reports of adolescent police stops and mothers' mental health. I consider heterogeneity across four indicators of parent criminal justice contact (mothers' police stops, fathers' police stops, mothers' incarceration, and fathers' incarceration), all measured prior to the explanatory and outcome variables. I estimate the relationship between adolescent police stops and mothers' mental health separately across subgroups, adjusting for all parent and adolescent characteristics including the lagged dependent variable, and test for statistically significant differences across subgroups (Paternoster, Brame, Mazerolle, and Piquero 1998).⁴

Third, I examine heterogeneity in the relationship between mothers' reports of adolescent police stops and mothers' mental health by emotional support. I estimate this association separately for the following two subgroups: mothers who report a confidante at the 15-year survey and mothers who do not report a confidante at the 15-year survey. I again test for statistically significant differences across subgroups.

Most mother- and adolescent-reported variables are missing fewer than 10% of observations. I preserve observations with multiple imputation, using the multivariate normal method and averaging estimates across 20 data sets (Allison 2001). Additionally, all models adjust for city fixed effects to account for the fact that respondents are sampled from 20 cities in the United States.

RESULTS

Descriptive Characteristics of Sample, by Adolescent Police Stops

Table 1 presents descriptive statistics of the sample. Nearly one-fifth (17.3%) of mothers reported depression and 5.7% of mothers reported anxiety. About 12.3% of mothers reported their adolescent had been stopped by the police. The majority of mothers in the sample identify as racial/ethnic minorities. About half (50.6%) are Black and one-quarter (24.9%) are Hispanic. At the nine-year survey, about two-fifths of mothers are living with the child's biological father (with 31.3% in marital relationships and 9.2% in cohabiting relationships) and about one-third (33.7%) of mothers have a romantic partner who is not the child's biological father. The majority of mothers (61.5%) and fathers (44.6%) have education beyond high school. About one-fifth (20.4%) of mothers and three-fifths (59.4%) of fathers report ever being stopped by the police themselves. Adolescents, on average, are 15.6 years old at the 15-year survey.

[Table 1 about here.]

Table 1 also shows stark differences in descriptive characteristics between mothers who do and do not report their adolescent experienced police contact. Mothers reporting an adolescent police stop, compared to mothers not reporting an adolescent police stop, are more than twice as likely to experience depression (30.1% compared to 15.5%, $p < .001$) and nearly three times as likely to experience anxiety (12.8% compared to 4.7%, $p < .001$). There are other descriptive differences across the two groups. In terms of demographic characteristics, mothers reporting adolescent police stops, compared to mothers not reporting adolescent police stops, are less likely to be White, more likely to be Black, and less likely to be Hispanic. Mothers reporting adolescent police stops are less likely to be employed, have lower income-to-poverty ratios, and report more material hardship. Mothers reporting adolescent police stops live in more disadvantaged neighborhoods, live in neighborhoods with fewer Whites and more Blacks, and live in neighborhoods with less social cohesion.

Estimating Mothers' Mental Health as a Function of Adolescent Police Stops

The descriptive characteristics show striking differences in mothers' depression and anxiety by mothers' reports of adolescent police stops. But these descriptive differences in mental health may result not from the police contact and instead from characteristics associated with contact.

Main Analyses. Table 2 presents results from logistic regression models estimating the relationship between mothers' reports of adolescent police stops and mothers' depression. Model 1, the unadjusted model, shows that mothers reporting an adolescent police stop, compared to mothers not reporting an adolescent police stop, have 2.34 times the odds of depression ($b = 0.851$, $p < .001$). In Model 2, which adjusts for an array of mother, father, and adolescent

characteristics, this association is reduced in magnitude but remains statistically significant ($b = 0.506$, $OR = 1.66$, $p < .01$). The association persists in Model 3, which further adjusts for prior depression ($b = 0.521$, $OR = 1.68$, $p < .01$), and in Model 4, which further adjusts for characteristics of adolescents that may stem from police contact including peer delinquency, substance use, and other types of criminal justice contact ($b = 0.527$, $OR = 1.69$, $p < .01$).⁵

The final conservative model shows that mothers reporting an adolescent police stop, compared to their counterparts, have 1.69 times the odds of depression. Importantly, this association is independent of mothers' reports of adolescent arrest and incarceration. The coefficients for adolescent arrest and incarceration do not reach statistical significance, and tests for differences across coefficients show that the adolescent police stops coefficient is significantly larger than the adolescent incarceration coefficient ($p = .004$), suggesting the intergenerational consequences stem from police contact. As relatively few mothers report an adolescent arrest or incarceration (5.8% and 2.9%, respectively), these statistically non-significant coefficients should be interpreted cautiously.

[Table 2 about here.]

Table 3 presents results from logistic regression models estimating the relationship between mothers' reports of adolescent police stops and mothers' anxiety. These results are consistent with those estimating depression. Model 1, the unadjusted model, shows that mothers reporting an adolescent police stop, compared to mothers not reporting an adolescent police stop, have a greater likelihood of anxiety ($b = 1.092$, $OR = 2.98$, $p < .001$). This association persists but is reduced in magnitude with the inclusion of control variables ($b = 0.702$, $OR = 2.02$, $p < .001$), prior anxiety ($b = 0.689$, $OR = 1.99$, $p < .001$), and potentially endogenous adolescent characteristics including other forms of criminal justice contact ($b = 0.668$, $OR = 1.95$, $p < .001$).

This final conservative model shows that adolescent police stops are associated with nearly twice the likelihood of anxiety among mothers. Similar to the estimates of mothers' depression, tests for differences across coefficients shows that the adolescent police stops coefficient is significantly larger than the adolescent incarceration coefficient ($p = .019$), again suggesting the importance of police exposure.

[Table 3 about here.]

Supplemental Analyses. I conduct two sets of supplemental analyses that examine the relationship between adolescent police stops and mothers' mental health. First, I consider two alternative measures of adolescent police stops, as mothers and adolescents do not always both report the adolescent experienced a police stop. Descriptive analyses show that mothers are more likely to report an adolescent police stop when the adolescent reports a greater number of stops (3.5 compared to 2.4 when only the adolescent reports a stop, $p < .01$) and when the adolescent reports higher intrusiveness of their most memorable stop (1.8 compared to 0.9 when only the adolescent reports a stop, $p < .001$). The discordance between mothers' and adolescents' reports of police stops captures some qualitative differences in police stops (with mothers being more likely to report adolescent police stops when they are frequently occurring or invasive).

The first specification replaces mothers' reports of adolescent police stops with a binary variable indicating either the mother or adolescent reports the adolescent was stopped by the police (31.1% of the sample). In the final model (the equivalent of Model 4 of Tables 2 and 3), this inclusive indicator of police stops is significantly associated with a greater likelihood of mothers' depression ($b = 0.264$, OR = 1.30, $p < .01$) and anxiety ($b = 0.317$, OR = 1.37, $p < .05$). The second specification replaces mothers' reports of adolescent police stops with a binary variable indicating the adolescent reports a police stop (26.6% of the sample). In the final model,

adolescents' reports of their own police stops is significantly associated with a greater likelihood of mothers' depression ($b = 0.217$, OR = 1.24, $p < .05$) but not mothers' anxiety ($b = 0.212$, OR = 1.24, $p = .160$). In both alternative specifications, the magnitude of the police stops coefficient is smaller than in the models presented, further supporting for the main findings (as one would expect mothers' reports of adolescent stops to be more consequential for mothers' mental health than adolescents' reports of their own stops).⁶

Next, I estimate the relationship between mothers' reports of adolescent police stops and mothers' mental health using propensity score matching. I estimate a logistic regression model that generates a propensity score (Appendix Table 1); ensure the means of covariates are statistically indistinguishable across treatment and control groups (Appendix Table 2); use kernel matching to estimate differences between the treatment and control groups (Appendix Table 3); and estimate Mantel-Haenszel bounds to evaluate how sensitive the propensity score results are to unmeasured characteristics (Appendix Table 4). Findings are consistent with the main results, with adolescent police stops being associated with a greater likelihood of mothers' depression and anxiety. These results hold across matched estimates; matched estimates that adjust for potentially endogenous characteristics of adolescents; and doubly robust matched estimates that further adjust for all control variables. Further, sensitivity analyses show that unmeasured characteristics would need to be substantial.

Variation in Adolescent Police Stops. The prior analyses establish a robust relationship between adolescent police stops and mothers' mental health. However, there exists variation in individual police stops and, accordingly, I estimate mothers' mental health as a function of the number and the intrusiveness of police stops. The mental health consequences may be especially pronounced if the adolescent experiences multiple stops or if the adolescent reports a particularly

invasive stop. Analyses, which adjust for all control variables and are necessarily limited to observations in which adolescents report a police stop, suggest two conclusions (Table 4). First, there is a positive association between number of adolescent police stops and mothers' mental health. Each additional police stop is positively associated with mothers' depression ($b = 0.043$, $OR = 1.04$, $p < .01$) and anxiety ($b = 0.060$, $OR = 1.06$, $p < .01$). Second, intrusion during police stops is associated with mothers' anxiety ($b = 0.269$, $OR = 1.31$, $p < .01$) but not depression.

[Table 4 about here.]

Contingencies in the Relationship between Adolescent Police Stops and Mothers' Mental Health

The stress process perspective suggests that stressors are especially consequential for population subgroups most likely to experience the stressor. Figure 1 shows that mothers' reports of adolescent police stops are not equally distributed across mothers' prior exposure to criminal justice contact.

[Figure 1 about here.]

Table 5 presents results from logistic regression models estimating the relationship between adolescent police stops and mothers' mental health across exposure to four different types of criminal justice contact. Panel A documents the consequences of adolescent police stops separately for mothers who have and have not experienced their own police stop, with different patterns across outcomes. The relationship between adolescent police stops and depression is larger among mothers without police contact ($b = 0.680$, $OR = 1.97$, $p < .01$) than mothers with police contact ($b = 0.182$, $OR = 1.20$, $n.s.$). Alternatively, the relationship between adolescent police stops and anxiety is larger among mothers with police contact ($b = 1.515$, $OR = 4.55$, $p <$

.001) than mothers without police contact ($b = 0.539$, $OR = 1.71$, $p < .05$). The differences across groups are statistically significant for anxiety ($z = 2.30$).

[Table 5 about here.]

The remaining panels document the consequences of adolescent police stops by three other types of criminal justice contact: fathers' police stops, mothers' incarceration, and fathers' incarceration. Adolescent police stops are more consequential for anxiety among mothers connected to men with police contact ($b = 0.993$, $OR = 2.70$, $p < .001$) than mothers connected to men without police contact ($b = -0.144$, $OR = 0.87$, $n.s.$). Similarly, adolescent police stops are more consequential for anxiety among mothers connected to men who have been incarcerated ($b = 1.012$, $OR = 2.75$, $p < .001$) than mothers connected to men who have not been incarcerated ($b = -1.158$, $OR = 0.31$, $p < .10$). These differences across groups are statistically significant ($z = 1.94$ and 3.07 , respectively).⁷ Taken together, the relationship between adolescent police stops and mothers' anxiety, in particular, is concentrated among mothers exposed to criminal justice contact themselves or via their offspring's fathers.⁸

Buffering Role of Emotional Support

Finally, the stress process perspective suggests that emotional support buffers the deleterious consequences of stressors for health, which I consider in Table 6. Among mothers with a confidante, there is a positive and statistically significant relationship between adolescent police stops and mental health problems. Mothers who report their adolescent experienced police contact, compared to their counterparts, have 1.53 times the odds of depression ($b = 0.428$, $p < .01$) and 1.66 times the odds of anxiety ($b = 0.509$, $p < .05$). There is also a positive and statistically significant relationship between adolescent police stops and mental health problems

among mothers without a confidante, with the magnitude of the association larger among this group. Mothers reporting an adolescent police stop, compared to their counterparts, have 4.71 times the odds of depression ($b = 1.550, p < .05$) and 6.09 times the odds of anxiety ($b = 1.806, p < .10$). The differences across groups are statistically significant for depression ($z = -1.71$) but not anxiety ($z = -1.18$). Supplemental analyses that instead use the full sample and include an interaction term between adolescent police stops and the presence of a confidante show that having a confidante significantly buffers the consequences of adolescent police stops for depression and anxiety.

[Table 6 about here.]

DISCUSSION

Police stops are the most common form of criminal justice contact and, among adolescents, may be considered an adverse childhood experience with pervasive deleterious consequences. Police stops can be traumatic experiences that include invasive searches, emotional degradation, and physical violence. This form of legal social control can also precipitate anticipatory stress about the possible repercussions of the stop. Despite the common and consequential nature of this type of criminal justice contact, police stops have received less systematic research attention than other consequential forms of criminal justice contact including arrests, convictions, and incarcerations (though see Baćak and Nowotny 2018; Brayne 2014; Geller 2018a, 2018b; Geller and Fagan 2019; Geller et al. 2014; Rios 2011; Sewell and Jefferson 2016; Sewell et al. 2016; Stuart 2016). In this article, I draw on the stress process perspective and conceptualize adolescent police stops as a distinctive stressor, an adverse experience that challenges the adaptive functioning of individuals and those connected to them (Avison 2010; Pearlin 1989), providing

the first accounting of the vicarious and contingent consequences of adolescent police stops for the mental health of adolescents' mothers.

Results suggest three primary conclusions corresponding to the stress process perspective, a theoretical framework linking the unequal distribution of stressors to health inequalities across the life course (Pearlin 1989). First, results show the mental health consequences of adolescent police stops are vicarious. Mothers who report their adolescent was stopped by the police, compared to their counterparts, have a greater likelihood of depression and anxiety. These relationships persist after adjusting for factors associated with both adolescent police stops and mothers' mental health, including demographic, socioeconomic, and neighborhood characteristics as well as mothers' own experiences with the criminal justice system. These relationships also persist after adjusting for lagged dependent variables, which account for changes in mental health before and after adolescent police exposure, and potentially endogenous adolescent characteristics including peer delinquency, substance use, and other forms of criminal justice contact. Adolescent police stops are more consequential for mothers' mental health than her own criminal justice contact (a finding that should be interpreted cautiously, as adolescent police stops may have occurred more recently than the mothers' own criminal justice contact and consequences may dissipate over time).

The deleterious vicarious consequences of mothers' reports of adolescent police stops for mothers' mental health is consistent with the stress process perspective and, specifically, the concept of stress contagion. Stress contagion, sometimes called stress proliferation or stress transfer, posits that stressors proliferate, vicariously, from the individual exposed to the stressor to those connected to that individual (Barr et al. 2018; Pearlin 1989; Pearlin et al. 1997). Indeed, the stressor of an adolescent police stop proliferates across generations, from offspring to

parents, increasing depression and anxiety among mothers of adolescents experiencing this stressor (Thoits 2010). The police stop, and the associated trauma experienced by the adolescent, may facilitate immediate distress and worry among mothers. The police stop may also engender mothers' uncertainty about future (Pearlin and Bierman 2013), may oblige mothers to modify their roles (Wethington 2000), and may alter adolescent attitudes and behaviors (Geller and Fagan 2019), all of which can increase depression and anxiety among mothers.

Data limitations preclude a systematic examination of the mechanisms linking mothers' reports of adolescent police stops to mothers' mental health, but results suggest evidence of possible pathways. First, results show the invasiveness of police stops is associated with a greater likelihood of anxiety among mothers, indicating that characteristics of the stop directly increase mothers' anxiety. Second, results show that adolescent police stops are more consequential for mothers' mental health than adolescent incarceration (albeit a relatively rare event among adolescents, as described above), suggesting that anticipatory stress stemming from police contact may link adolescent police stops to mothers' mental health (Pearlin and Bierman 2013). Police stops may prompt uncertainty about aspects of the adolescents' future, including ambiguity about how the adolescent will respond to the stop and ambiguity about future criminal justice contact. Third, analyses that substitute the measure of mother-reported stops with adolescent-reported stops provide suggestive evidence of mechanisms. The fact that the relationship between adolescent police stops and mothers' mental health exists, albeit to a lesser extent, absent mothers' knowledge of the stop suggests that police stops engender changes in adolescents that increase mothers' depression and anxiety. Future research should systematically interrogate these and other underlying processes.

Additionally, results show the consequences of mothers' reports of adolescent police stops are contingent. The stress process perspective posits both the prevalence and consequences of stressors are concentrated among vulnerable populations (Pearlin et al. 1981; Pearlin 1989). Results show the prevalence of adolescent police stops is concentrated among a vulnerable population that has been historically excluded from the stress process perspective, mothers with prior exposure to the criminal justice system. Results also show the consequences of adolescent police stops are contingent on this prior exposure. Mothers with prior exposure—either via their own police stop or incarceration or via a police stop or incarceration of their adolescent's father—are more likely to experience depression and, in particular, anxiety stemming from the stop. It may be that these mothers have an acute awareness of the meaning and consequences of the police stop for their adolescent. It may also be that, for these mothers, the adolescent police stop occurs in a context of additional stressors and the accumulation of stressors exacerbates the deleterious mental health consequences of adolescent police stops. Future research should interrogate potential contingent pathways.

Finally, the vicarious consequences of mothers' reports of adolescent police stops are contingent on mothers' available emotional support, with the presence of a confidante partially buffering the deleterious mental health consequences of adolescent police stops for mothers. Though there are differences in the vicarious consequences of adolescent police stops based on the presence of a confidante, this form of emotional support does not completely attenuate the deleterious mental health consequences. That is, even mothers with a confidante experience increased depression and anxiety when their adolescent experiences a police stop. But the smaller association between adolescent police stops and mothers' mental health in the presence of a confidante is consistent with the stress process perspective that highlights the buffering role

of emotional support (Thoits 1982, 2010). Having someone to confide in about worries stemming from adolescent police exposure may help mothers cope with the negative consequences stemming from the police stop (Thoits 2010).

Taken together, these results substantiate the stress process perspective but also provide ideas about opportunities for extending this perspective. First, the subgroup analyses occasionally show substantively different findings across the two outcome variables (with subgroup differences being especially pronounced for mothers' anxiety). The stress process perspective is non-specific, making it widely applicable, but future research may more precisely consider antecedents of different mental health conditions (Thoits 2010). Second, findings about the contingent consequences of adolescent police stops highlight the need to incorporate criminal justice contact as a marker of vulnerability in the stress process perspective. Forms of criminal justice contact, especially incarceration, have been conceptualized as a stressor (e.g., Massoglia 2008; Sugie and Turney 2017), but these findings suggest that criminal justice contact may also shape responses to stressors. Third, the stress process perspective is often employed to examine vicarious effects (i.e., how a stressor has proliferating consequences for those connected to the individual exposed to the stressor [Pearlin et al. 2005]) or contingent effects (i.e., how exposure to a stressor is differentially consequential for individuals [Sugie and Turney 2017]). This research suggests stressors may have intersecting vicarious and contingent consequences.

Limitations

The Fragile Families data provide an excellent opportunity for investigating the vicarious and contingent consequences of adolescent police stops, but attributes of the data should be kept in mind when interpreting the findings. First, the sample excludes adolescents born in rural areas,

and adolescent police stops may be differentially consequential in urban and rural areas (Eason 2017). Second, the key variables were measured during a time of high-profile police violence in the United States, which may accentuate the observed relationship between adolescent police stops and mothers' mental health. Future research should examine this relationship across time. Third, mothers are only asked to report on police stops of the focal child. It is possible that mothers have other children who experienced police contact, suggesting the results presented provide a conservative estimate of the association between adolescent police stops and mothers' mental health. Finally, though I address causal inference by adjusting for confounding characteristics and by conducting robustness checks, these observational data necessarily preclude causal conclusions. For example, neighborhood-level violence may be associated with both adolescent police stops and mothers' mental health. However, even this variable is highly correlated with the control variables that are included in the analyses, and it seems unlikely that accounting for neighborhood-level violence would render the robust relationship between adolescent police stops and mothers' mental health spurious. Future research, using data that includes time-varying measures of adolescent police stops and mothers' mental health, should consider analytic strategies—such as individual-level fixed effects models—that could account for stable unobserved characteristics.

Conclusions

The current study documents that adolescent police exposure is a stressor with deleterious consequences for mental health. This stressor is both vicarious, affecting the mental health of mothers of adolescents exposed to the stop, and contingent, differentially affecting mothers' mental health based on her prior criminal justice exposure and her available emotional support.

This study extends prior research in two primary ways. First, this study highlights that the criminal justice system has durable adverse consequences for the mothers of adolescents entangled in the system. This complements and extends existing research that examines the individual-level health consequences of police stops (e.g., Baćak and Nowotny 2018; Geller et al. 2014; Sewell and Jefferson 2016) and existing research that examines the intergenerational consequences of parental criminal justice contact (specifically, incarceration) for offspring health and wellbeing (e.g., Foster and Hagan 2013). Second, this study highlights the consequential nature of police stops. Police stops are the most common form of criminal justice contact and are especially common experiences among individuals of color and individuals living in economically disadvantaged and highly surveilled neighborhoods. Taken together, the results suggest that by both overlooking the consequences of police stops and by overlooking the consequences for the parents of those enmeshed in the criminal justice system, prior research underestimates the role of the criminal justice system in structuring health inequality.

ENDNOTES

¹ This is not to suggest that other forms of criminal justice contact that are less commonly experienced by adolescents, such as incarceration, are not stressors that can have proliferating consequences for families.

² Supplemental analyses that expanded the analytic sample to include all primary caregivers, and not just mothers, produced consistent results.

³ Adolescents reported on their age at their first police stop at the 15-year survey. Of those who reported any stop, 4% reported that their first police stop occurred before age 9. Supplemental analyses excluding these observations are substantively similar to those presented.

⁴ In supplemental analyses, I estimated the relationship between adolescent police stops and mothers' mental health with linear probability models (Mood 2010). These analyses produced coefficients that were comparable with the average marginal effects from the logistic regression models.

⁵ A measure of adolescent delinquency is available at the nine-year survey, and this measure is used to ensure proper temporal ordering between the control variables and adolescent police stops. However, delinquency may take different forms at ages nine and 15 and analyses that instead or additionally adjust for adolescent delinquency at the 15-year survey produce substantively similar results.

⁶ In additional analyses, I estimated a multinomial logistic regression model to examine predictors of discordance in mother- and adolescent-reported adolescent stops ($r = .31$). Relatively few variables independently predict discordance. Mother-reported stops, compared to both mother- and adolescent-reported stops, are less common when mothers report heavy drinking and among mothers of boys. Adolescent-reported stops, compared to both mother- and

adolescent-reported stops, are negatively correlated with parenting stress, heavy drinking, and when the adolescent is a boy. This is positively correlated with adolescent age. Discordance is not associated with mothers' depression or anxiety.

⁷ It is not possible to estimate the relationship among mothers with an incarceration history because of sample size issues.

⁸ Following the stress process perspective, and its proposition about unequal consequences of stressors, adolescent police stops would be most consequential for mothers of boys, mothers of color, and mothers of low socioeconomic status. I estimated the relationship across demographic subgroups. Results suggest three conclusions. First, the relationship between adolescent police stops and mothers' depression is statistically significantly larger among mothers of girls than mothers of boys. Second, the relationship between adolescent police stops and mothers' anxiety is statistically significantly larger among White mothers than Black mothers. Third, there are no differences in the relationship by mothers' educational attainment or poverty status. The association between adolescent police stops and mothers' mental health may also vary by mother-adolescent relationship quality (measured by adolescent reports of how close he/she is to her mother). Results provide no evidence for this.

REFERENCES

- Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: New Press.
- Allison, Paul D. 2001. *Missing Data*. New York: Sage Publications.
- Avison, William R. 2010. "Incorporating Children's Lives into a Life Course Perspective on Stress and Mental Health." *Journal of Health and Social Behavior* 51:361–375.
- Bačák, Valerio, and Kathryn M. Nowotny. 2018. "Race and the Association Between Police Stops and Depression Among Young Adults: A Research Note." *Race and Justice*.
- Barr, Ashley B., Leslie Gordon Simons, Ronald L. Simons, Steven RH Beach, and Robert A. Philibert. 2018. "Sharing the Burden of the Transition to Adulthood: African American Young Adults' Transition Challenges and Their Mothers' Health Risk." *American Sociological Review* 83:143–172.
- Brayne, Sarah. 2014. "Surveillance and System Avoidance: Criminal Justice Contact and Institutional Attachment." *American Sociological Review* 79:367–391.
- Brunson, Rod K., and Ronald Weitzer. 2009. "Police Relations with Black and White Youths in Different Urban Neighborhoods." *Urban Affairs Review* 44:858–885.
- Cohen, Sheldon, and Thomas A. Wills. 1985. "Stress, Social Support, and the Buffering Hypothesis." *Psychological Bulletin* 98:310–357.
- Comfort, Megan. 2008. *Doing Time Together: Love and Family in the Shadow of the Prison*. Chicago: University of Chicago Press.
- Dickman, Scott J. 1990. "Functional and Dysfunctional Impulsivity: Personality and Cognitive Correlates." *Journal of Personality and Social Psychology* 58:95–102.
- Eason, John M. 2017. *Big House on the Prairie: Rise of the Rural Ghetto and Prison*

- Proliferation*. Chicago: University of Chicago Press.
- Eaton, William W. 1978. "Life Events, Social Supports, and Psychiatric Symptoms: A Re-Analysis of the New Haven Data." *Journal of Health and Social Behavior* 19: 230–234.
- Elder, Glen H., Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3–19 in *Handbook of the Life Course*, edited by J. Mortimer and M. Shanahan. New York: Kluwer Academic/Plenum Publishers.
- Feld, Barry. 2013. *Kids, Cops, and Confessions: Inside the Interrogation Room*. New York: New York University Press.
- Geller, Amanda. 2018a. "Police Contact and the Mental Health of Urban Teens." Presented at the annual meeting of the American Sociological Association.
- Geller, Amanda. 2018b. "Policing America's Children: Police Contact and Consequences among Teens in Fragile Families. Fragile Families Working Paper WP18-02-FF.
- Geller, Amanda, and Jeffrey Fagan. 2019. "Police Contact and the Legal Socialization of Urban Teens." *The Russell Sage Foundation Journal of the Social Sciences*.
- Geller, Amanda, Jeffrey Fagan, Tom Tyler, and Bruce G. Link. 2014. "Aggressive Policing and the Mental Health of Young Urban Men." *American Journal of Public Health* 104:2321–2327.
- Giordano, Peggy C., Jennifer E. Copp, W. D. Manning, & Monica A. Longmore. 2019. "Linking Parental Incarceration and Family Dynamics Associated with Intergenerational Transmission: A Life-Course Perspective." *Criminology*.
- Green, Kerry M., Margaret E. Ensminger, Judith A. Robertson, and Hee-Soon Juon. 2006. "Impact of Adult Sons' Incarceration on African American Mothers' Psychological Distress." *Journal of Marriage and Family* 68:430–441.

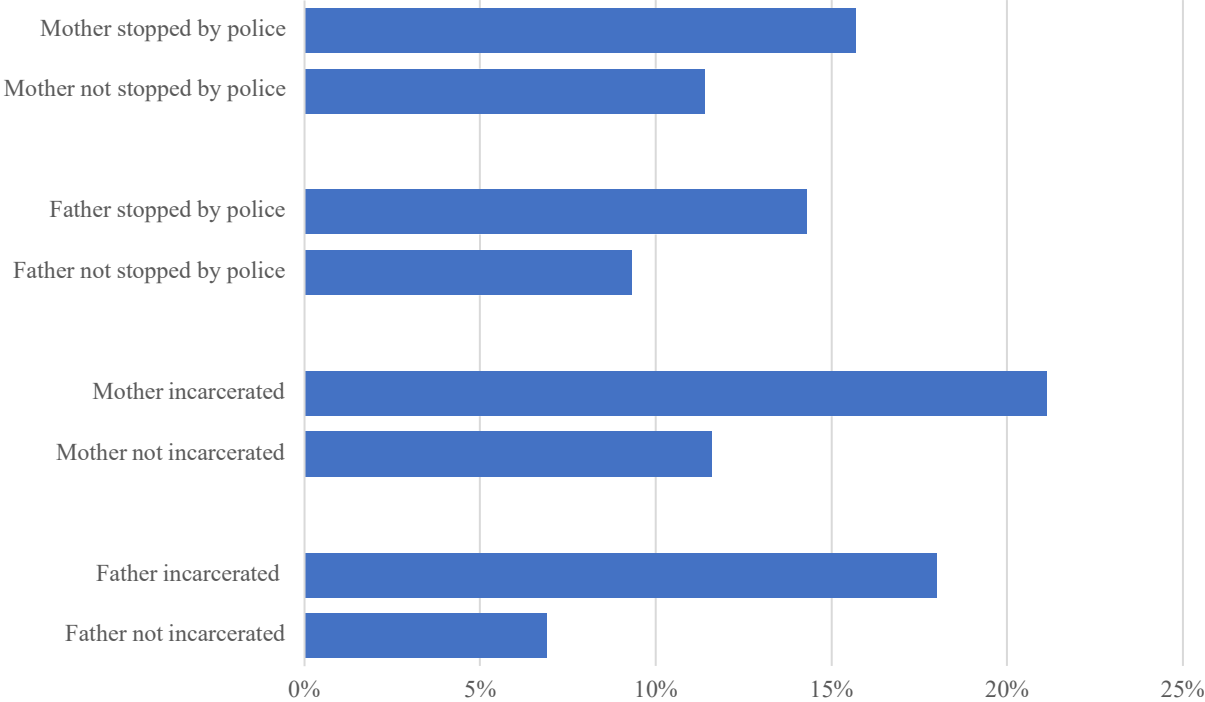
- Kessler, Ronald C., Gavin Andrews, Daniel Mroczek, Bedirhan Ustun, and Hans-Ulrich Wittchen. 1998. "The World Health Organization Composite International Diagnostic Interview Short-Form (CIDI-SF)." *International Journal of Methods in Psychiatric Research* 7:171–185.
- Kirk, David S., and Sara Wakefield. 2018. "Collateral Consequences of Punishment: A Critical Review and Path Forward." *Annual Review of Criminology* 1:171–194.
- Kubrin, Charis E., Steven F. Messner, Glenn Deane, Kelly McGeever, and Thomas D. Stucky. 2010. "Proactive Policing and Robbery Rates Across US Cities." *Criminology* 48:57–97.
- Langton, Lynn, and Matthew Durose. 2016. "Police Behavior During Traffic and Street Stops, 2011." Washington, DC: Bureau of Justice Statistics.
- Lee, Hedwig, and Margaret Takako Hicken. 2016. "Death by a Thousand Cuts: The Health Implications of Black Respectability Politics." *Souls* 18:421–445.
- Massoglia, Michael. 2008. "Incarceration as Exposure: The Prison, Infectious Disease, and Other Stress-Related Illnesses." *Journal of Health and Social Behavior* 49:56–71.
- Paternoster, Raymond, Robert Brame, Paul Mazerolle, and Alex Piquero. 1998. "Using the Correct Statistical Test for the Equality of Regression Coefficients." *Criminology* 36: 859–866.
- Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30:241–256.
- Pearlin, Leonard I., Carol S. Aneshensel, and Allen J. LeBlanc. 1997. "The Forms and Mechanisms of Stress Proliferation: The Case of AIDS Caregivers." *Journal of Health and Social Behavior* 38:223–236.
- Pearlin, Leonard I., and Alex Bierman. 2013. "Current Issues and Future Directions in Research

- into the Stress Process.” Pp. 325–340 in *Handbook of the Sociology of Mental Health*, edited by C. S. Aneshensel, J. C. Phelan, and A. Bierman. Netherlands: Springer.
- Pearlin, Leonard I., Elizabeth G. Menaghan, Morton A. Lieberman, and Joseph T. Mullan. 1981. “The Stress Process.” *Journal of Health and Social Behavior* 22:337–356.
- Pearlin, Leonard I., and Carmi Schooler. 1978. “The Structure of Coping.” *Journal of Health and Social Behavior* 19:2–21.
- Pearlin, Leonard I., Scott Schieman, Elena M. Fazio, and Stephen C. Meersman. 2005. “Stress, Health, and the Life Course: Some Conceptual Perspectives.” *Journal of Health and Social Behavior* 46:205–219.
- Reichman, Nancy E., Julien O. Teitler, Irwin Garfinkel, and Sara S. McLanahan. 2001. “Fragile Families: Sample and Design.” *Children and Youth Services Review* 23:303–326.
- Rios, Victor M. 2011. *Punished: Policing the Lives of Black and Latino Boys*. New York: New York University Press.
- Rodriguez, Nancy, Hilary Smith, and Marjorie S. Zatz. 2009. “Youth is Enmeshed in a Highly Dysfunctional Family System”: Exploring the Relationship among Dysfunctional Families, Parental Incarceration, and Juvenile Court Decision Making.” *Criminology* 47:177–208.
- Sewell, Abigail A., and Kevin A. Jefferson. 2016. “Collateral Damage: The Health Effects of Invasive Police Encounters in New York City.” *Journal of Urban Health* 93:42–67.
- Sewell, Abigail A., Kevin A. Jefferson, and Hedwig Lee. 2016. “Living Under Surveillance: Gender, Psychological Distress, and Stop-Question-and-Frisk Policing in New York City.” *Social Science & Medicine* 159:1–13.
- Shedd, Carla. 2015. *Unequal City: Race, Schools, and Perceptions of Injustice*. New York:

- Russell Sage Foundation.
- Stuart, Forrest. 2016. *Down, Out, and Under Arrest: Policing and Everyday Life in Skid Row*. Chicago: University of Chicago Press.
- Swarns, Rachel. 2016. “‘I Have a Black Son in Baltimore’: Anxious New Parents and an Era of Unease.” *The New York Times*.
- Thoits, Peggy A. 1982. “Conceptual, Methodological, and Theoretical Problems in Studying Social Support as a Buffer Against Life Stress.” *Journal of Health and Social Behavior* 23:145–159.
- Thoits, Peggy A. 2010. “Stress and Health: Major Findings and Policy Implications.” *Journal of Health and Social Behavior* 51:S41–S53.
- Thornberry, Terence P. 2005. “Explaining Multiple Patterns of Offending Across the Life Course and Across Generations.” *The Annals of the American Academy of Political and Social Science* 602:156–195.
- Thornberry, Terence P., and Marvin D. Krohn. 2000. “The Self-Report Method for Measuring Delinquency and Crime.” *Criminal Justice* 4:33–83.
- Turney, Kristin, and Christopher Wildeman. 2018. “Maternal Incarceration and the Transformation of Urban Family Life.” *Social Forces* 96:1155–1182.
- Weschler, David. 1981. *Wechsler Adult Intelligence Scale—Revised (WAIS-R manual)*. New York: The Psychological Corporation. Harcourt Brace Jovanovich.
- Western, Bruce. 2018. *Homeward: Life in the Year After Prison*. New York: Russell Sage Foundation.
- Wethington, Elaine. 2000. “Contagion of Stress” Pp. 229–253 in *Advances in Group Processes*, edited by S.R. Thye and E. Lawler. Bingley, UK: Emerald Group Publishing Limited.

- Wethington, Elaine, and Ronald C. Kessler. 1986. "Perceived Support, Received Support, and Adjustment to Stressful Life Events." *Journal of Health and Social Behavior* 27:78–89.
- Wildeman, Christopher, Jason Schnittker, and Kristin Turney. 2012. "Despair by Association? The Mental Health of Mothers with Children by Recently Incarcerated Fathers." *American Sociological Review* 77:216–243.

Figure 1. Frequencies of Mothers' Reports of Adolescent Police Stops, by Mothers' Prior Exposure to the Criminal Justice System



	Full sample		Mothers' Reports of Adolescent Police Stops			
			Police stop		No police stop	
	% or M	(S.D.)	% or M	(S.D.)	% or M	(S.D.)
<i>Key Variables</i>						
Mother depression (y15)	17.3%		30.1%		15.5%	***
Mother anxiety (y15)	5.7%		12.8%		4.7%	***
Adolescent stopped by police (y15)	12.3%		100.0%		0.0%	
<i>Mother Characteristics</i>						
Race/ethnicity (b)						
White (non-Hispanic)	20.9%		16.3%		21.5%	*
Black (non-Hispanic)	50.6%		61.2%		49.1%	***
Hispanic	24.9%		19.4%		25.6%	**
Other race (non-Hispanic)	3.7%		3.2%		3.8%	
Foreign-born (b)	14.2%		6.1%		15.3%	***
Age (y9)	34.490	(6.047)	32.655	(5.363)	34.747	(6.093) ***
Lived with both biological parents (b)	42.8%		28.8%		44.8%	***
Relationship with adolescent's father (y9)						
Married	31.3%		17.1%		33.3%	***
Cohabiting	9.2%		9.6%		9.2%	
Not residential	59.5%		73.3%		57.6%	***
Repartnered (y9)	33.7%		40.2%		32.8%	**
Relationship quality (y9)	2.796	(1.473)	2.328	(1.404)	2.861	(1.471) ***
Number of children in household (y9)	2.715	(1.313)	2.957	(1.428)	2.681	(1.292) ***
Educational attainment (y9)						
Less than high school	20.6%		24.5%		20.1%	*
High school diploma or GED	17.8%		22.1%		17.2%	*
More than high school	61.5%		53.4%		62.7%	***
Employed (y9)	64.0%		59.4%		64.6%	^
Income-to-poverty ratio (y9)	2.081	(2.310)	1.435	(1.449)	2.172	(2.392) ***
Material hardship (y9)	1.464	(1.842)	2.015	(2.025)	1.386	(1.801) ***
Parenting stress (y9)	2.035	(0.686)	2.252	(0.723)	2.004	(0.675) ***
Fair or poor health (y9)	16.1%		22.8%		15.1%	***
Heavy drinking (y9)	8.5%		15.0%		7.6%	***
Illicit drug use (y9)	5.7%		7.6%		5.4%	*
Neighborhood disadvantage (y9)	0.000	(1.000)	0.154	(1.054)	-0.022	(0.990) ***
Neighborhood percent white (y9)	37.1%		32.5%		37.7%	**
Neighborhood percent black (y9)	35.3%		40.0%		34.7%	**
Neighborhood percent Hispanic (y9)	20.4%		21.3%		20.3%	
Neighborhood social control (y9)	3.203	(0.834)	3.174	(0.876)	3.207	(0.828)
Neighborhood social cohesion (y9)	2.773	(0.483)	2.713	(0.516)	2.781	(0.478) *
Cognitive skills (y3)	6.814	(2.665)	6.662	(2.493)	6.835	(2.688)
Impulsivity (y3)	2.009	(0.605)	2.120	(0.628)	1.994	(0.600) ***
Ever stopped by police (y3, y5, y9)	20.4%		26.1%		19.6%	**
Ever incarcerated (y1, y3, y5, y9)	7.3%		12.6%		6.6%	***
Depression, lagged (y9)	16.1%		23.5%		15.1%	***
Anxiety, lagged (y3)	3.9%		5.9%		3.6%	*
Emotional support (y15)	89.6%		88.3%		89.8%	

Table 1 (continued).							
<i>Father Characteristics</i>							
Race/ethnicity (b)							
White (non-Hispanic)	18.5%		10.7%		19.6%		***
Black (non-Hispanic)	53.0%		67.0%		51.0%		***
Hispanic	24.8%		19.0%		25.6%		**
Other race (non-Hispanic)	3.7%		3.2%		3.8%		
Foreign-born (b)	15.5%		7.8%		16.6%		***
Age (y9)	36.894	(7.143)	35.051	(6.416)	37.153	(7.202)	***
Lived with both biological parents (b)	44.3%		26.1%		45.5%		*
Repartnered (y9)	3.7%		3.7%		3.7%		
Relationship quality (y9)	3.206	(1.377)	2.836	(1.387)	3.259	(1.367)	***
Number of children in household (y9)	0.982	(1.380)	1.250	(0.392)	0.945	(1.375)	**
Educational attainment (y9)							
Less than high school	25.8%		34.0%		24.6%		***
High school diploma or GED	29.7%		30.9%		29.5%		
More than high school	44.6%		35.1%		45.9%		***
Employed (y9)	71.2%		58.9%		73.0%		***
Income-to-poverty ratio (y9)	2.592	(2.832)	1.834	(2.189)	2.699	(2.895)	***
Material hardship (y9)	1.400	(1.923)	1.752	(2.044)	1.350	(1.901)	***
Parenting stress (y9)	1.909	(0.695)	2.062	(0.744)	1.888	(0.685)	***
Fair or poor health (y9)	14.6%		18.4%		14.0%		^
Heavy drinking (y9)	27.2%		29.1%		27.0%		*
Illicit drug use (y9)	13.6%		21.4%		12.5%		***
Neighborhood disadvantage (y9)	0.000	(1.000)	0.172	(0.958)	-0.021	(1.004)	**
Neighborhood percent white (y9)	35.7%		29.7%		36.6%		**
Neighborhood percent black (y9)	37.1%		43.4%		36.2%		**
Neighborhood percent Hispanic (y9)	20.1%		20.5%		20.0%		
Cognitive skills (y3)	6.436	(2.718)	6.410	(2.610)	6.440	(2.773)	
Impulsivity (y1)	1.998	(0.664)	2.076	(0.720)	1.987	(0.655)	***
Ever stopped by police (y1, y3, y5, y9)	59.4%		69.3%		58.1%		***
Ever incarcerated (b, y1, y3, y5, y9)	48.6%		71.2%		45.5%		***
<i>Adolescent Characteristics</i>							
Male (b)							
Male (b)	51.5%		70.0%		48.9%		***
Age (y15)	15.569	(0.756)	15.796	(0.828)	15.538	(0.740)	***
Low birth weight (b)	9.1%		10.1%		9.0%		
Delinquency (y9)	1.239	(1.787)	1.995	(2.185)	1.132	(1.697)	***
Impulsivity (y15)	2.459	(0.699)	2.697	(0.683)	2.425	(0.695)	***
Peer delinquency (y15)	1.193	(0.298)	1.338	(0.392)	1.173	(0.276)	***
Police officer regularly stationed at school (y15)	79.8%		81.8%		79.5%		
Ever smoked (y15)	4.7%		14.7%		3.3%		***
Ever drank alcohol without parents (y15)	16.5%		31.7%		14.4%		***
Ever used marijuana or other drug (y15)	21.3%		47.9%		17.6%		***
Ever arrested (y15)	5.8%		37.1%		1.4%		***
Ever incarcerated (y15)	2.9%		19.6%		0.5%		***
N	3,063		377		2,686		
Notes: b = measured at baseline, y1 = measured at 1-year survey, y3 = measured at 3-year survey, y5 = measured at 5-year survey, y9 = measured at 9-year survey, y15 = measured at 15-year survey. Asterisks indicate statistically significant differences between mothers of adolescents who experience a police stop and mothers of adolescents who do not experience a police stop. ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.							

Table 2. Logistic Regression Models Estimating Mothers' Depression as a Function of Mothers' Reports of Adolescent Police Stop

	Model 1		Model 2		Model 3		Model 4	
	<i>bivariate</i>		<i>+ controls</i>		<i>+ lagged depression</i>		<i>+ 15-year adolescent characteristics</i>	
Adolescent stopped by police	0.851	(0.162) ***	0.506	(0.163) **	0.521	(0.155) **	0.527	(0.186) **
<i>Mother Characteristics</i>								
Race/ethnicity (reference = White [non-Hispanic])								
Black (non-Hispanic)			0.028	(0.298)	-0.042	(0.306)	-0.038	(0.299)
Hispanic			-0.029	(0.330)	-0.029	(0.327)	-0.027	(0.326)
Other race (non-Hispanic)			-0.347	(0.305)	-0.363	(0.334)	-0.347	(0.339)
Foreign-born			-0.212	(0.230)	-0.238	(0.255)	-0.234	(0.254)
Age			-0.017	(0.012)	-0.020	(0.014)	-0.019	(0.015)
Lived with both biological parents			-0.032	(0.112)	0.014	(0.119)	0.016	(0.121)
Relationship with adolescent's father (reference = married)								
Cohabiting			0.032	(0.229)	0.091	(0.233)	0.091	(0.230)
Not residential			-0.035	(0.200)	-0.013	(0.192)	-0.017	(0.196)
Repartnered			0.016	(0.168)	0.111	(0.175)	0.104	(0.177)
Relationship quality			-0.043	(0.076)	-0.039	(0.076)	-0.039	(0.074)
Number of children in household			0.079	(0.044) ^	0.086	(0.046)	0.080	(0.046) ^
Educational attainment (reference = less than high school)								
High school diploma or GED			0.073	(0.131)	0.118	(0.134)	0.114	(0.132)
More than high school			0.143	(0.106)	0.185	(0.109) ^	0.183	(0.111) ^
Employed			-0.215	(0.101) *	-0.130	(0.107)	-0.137	(0.106)
Income-to-poverty ratio			0.016	(0.026)	0.017	(0.027)	0.019	(0.027)
Material hardship			0.140	(0.026) ***	0.010	(0.028) **	0.093	(0.027) **
Parenting stress			0.202	(0.070) **	0.115	(0.071)	0.113	(0.072)
Fair or poor health			0.591	(0.144) ***	0.474	(0.157) **	0.472	(0.159) **
Heavy drinking			0.052	(0.164)	-0.005	(0.175)	-0.013	(0.178)
Illicit drug use			0.222	(0.156)	-0.044	(0.171)	-0.039	(0.170)
Neighborhood disadvantage			-0.051	(0.074)	-0.054	(0.071)	-0.060	(0.072)
Neighborhood percent white			0.019	(0.009) *	0.018	(0.009) ^	0.018	(0.009) ^
Neighborhood percent black			0.015	(0.009) ^	0.015	(0.009) ^	0.015	(0.009) ^
Neighborhood percent Hispanic			0.014	(0.082)	0.013	(0.010)	0.014	(0.010)
Neighborhood social control			-0.069	(0.082)	-0.060	(0.080)	-0.082	(0.082)
Neighborhood social cohesion			-0.218	(0.145)	-0.180	(0.148)	-0.187	(0.148)
Cognitive skills			-0.003	(0.024)	-0.018	(0.026)	-0.018	(0.025)
Impulsivity			0.201	(0.092) *	0.168	(0.091) ^	0.166	(0.094) ^
Ever stopped by police			0.010	(0.078)	-0.045	(0.082)	-0.042	(0.081)
Ever incarcerated			0.072	(0.184)	0.111	(0.210)	0.111	(0.212)
Depression, lagged					1.235	(0.138) ***	1.234	(0.136) ***
<i>Father Characteristics</i>								
Race/ethnicity (reference = White [non-Hispanic])								
Black (non-Hispanic)			-0.214	(0.267)	-0.125	(0.290)	-0.118	(0.287)
Hispanic			-0.216	(0.299)	-0.174	(0.304)	-0.179	(0.299)
Other race (non-Hispanic)			0.228	(0.275)	0.387	(0.288)	0.384	(0.289)
Foreign-born			-0.275	(0.215)	-0.253	(0.222)	-0.254	(0.225)
Age			0.016	(0.010)	0.016	(0.011)	0.015	(0.011)
Lived with both biological parents			-0.005	(0.110)	0.032	(0.115)	0.035	(0.117)
Repartnered			0.119	(0.354)	0.108	(0.360)	0.112	(0.361)
Relationship quality			-0.065	(0.070)	-0.036	(0.073)	-0.037	(0.073)
Number of children in household			-0.034	(0.057)	-0.031	(0.062)	-0.030	(0.062)

Table 2 (continued).													
Educational attainment (reference = less than high school)													
High school diploma or GED				-0.004	(0.109)			-0.010	(0.124)	-0.009	(0.123)		
More than high school				0.004	(0.142)			-0.031	(0.150)	-0.024	(0.149)		
Employed				0.143	(0.147)			0.173	(0.143)	0.167	(0.145)		
Income-to-poverty ratio				-0.037	(0.032)			-0.036	(0.034)	-0.036	(0.034)		
Material hardship				-0.049	(0.026)	^		-0.040	(0.028)	-0.040	(0.029)		
Parenting stress				0.035	(0.086)			0.038	(0.084)	0.037	(0.084)		
Fair or poor health				0.061	(0.162)			0.090	(0.163)	0.094	(0.164)		
Heavy drinking				0.018	(0.136)			0.001	(0.145)	0.001	(0.145)		
Illicit drug use				-0.048	(0.194)			-0.025	(0.209)	-0.031	(0.211)		
Neighborhood disadvantage				0.084	(0.098)			0.085	(0.094)	0.085	(0.094)		
Neighborhood percent white				-0.011	(0.011)			-0.009	(0.011)	-0.009	(0.011)		
Neighborhood percent black				-0.015	(0.011)			-0.011	(0.011)	-0.011	(0.011)		
Neighborhood percent Hispanic				-0.009	(0.012)			-0.008	(0.012)	-0.008	(0.012)		
Cognitive skills				-0.001	(0.023)			0.000	(0.023)	-0.001	(0.024)		
Impulsivity				0.091	(0.093)			0.079	(0.091)	0.082	(0.092)		
Ever stopped by police				0.048	(0.107)			0.025	(0.117)	0.028	(0.117)		
Ever incarcerated				0.226	(0.095)	*		0.217	(0.099)	*	0.207	(0.097)	*
<i>Adolescent Characteristics</i>													
Male				-0.017	(0.093)			-0.034	(0.096)	-0.032	(0.092)		
Age				-0.028	(0.063)			-0.040	(0.054)	-0.049	(0.058)		
Low birth weight				-0.093	(0.194)			-0.126	(0.185)	-0.119	(0.188)		
Delinquency				0.031	(0.038)			0.025	(0.038)	^	0.023	(0.039)	
Impulsivity				0.134	(0.074)	^		0.128	(0.071)	***	0.114	(0.077)	
Peer delinquency										0.076	(0.199)		
Police officer regularly stationed at school										0.069	(0.104)		
Ever smoked										0.273	(0.233)		
Ever drank alcohol without parents										-0.077	(0.151)		
Ever used marijuana or other drug										0.044	(0.128)		
Ever arrested										0.026	(0.291)		
Ever incarcerated										-0.288	(0.298)		
Log likelihood	-1,389			-1,273				-1,223		-1,221			
Constant	-1.695			-2.323				-2.367		-2.359			
N	3,063			3,063				3,063		3,063			
Notes: All models include city fixed-effects. ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.													

Table 3. Logistic Regression Models Estimating Mothers' Anxiety as a Function of Mothers' Reports of Adolescent Police Stops

	Model 1		Model 2		Model 3		Model 4	
	<i>bivariate</i>		<i>+ controls</i>		<i>+ lagged anxiety</i>		<i>+ 15-year adolescent characteristics</i>	
Adolescent stopped by police	1.092	(0.181) ***	0.702	(0.185) ***	0.689	(0.175) ***	0.668	(0.231) **
<i>Mother Characteristics</i>								
Race/ethnicity (reference = White [non-Hispanic])								
Black (non-Hispanic)			-0.101	(0.363)	-0.105	(0.385)	-0.096	(0.379)
Hispanic			-0.014	(0.401)	-0.026	(0.421)	-0.013	(0.435)
Other race (non-Hispanic)			-0.257	(0.557)	-0.351	(0.580)	-0.348	(0.580)
Foreign-born			-0.086	(0.463)	-0.053	(0.466)	-0.121	(0.497)
Age			0.007	(0.021)	0.002	(0.022)	0.001	(0.022)
Lived with both biological parents			-0.069	(0.154)	-0.077	(0.154)	-0.057	(0.143)
Relationship with adolescent's father (reference = married)								
Cohabiting			-0.107	(0.311)	-0.161	(0.326)	-0.143	(0.333)
Not residential			-0.280	(0.328)	-0.290	(0.346)	-0.284	(0.358)
Repartnered			0.067	(0.187)	0.038	(0.190)	0.050	(0.189)
Relationship quality			0.139	(0.109)	0.156	(0.107)	0.154	(0.105)
Number of children in household			-0.001	(0.059)	0.011	(0.061)	0.009	(0.063)
Educational attainment (reference = less than high school)								
High school diploma or GED			-0.130	(0.235)	-0.098	(0.244)	-0.084	(0.242)
More than high school			0.057	(0.197)	0.053	(0.210)	0.037	(0.210)
Employed			-0.838	(0.184) ***	-0.828	(0.187) ***	-0.819	(0.192) ***
Income-to-poverty ratio			-0.071	(0.082)	-0.064	(0.080)	-0.069	(0.079)
Material hardship			0.140	(0.049) **	0.133	(0.051) **	0.134	(0.050) **
Parenting stress			0.374	(0.123) **	0.364	(0.124) **	0.376	(0.115) **
Fair or poor health			0.629	(0.169) ***	0.563	(0.165) **	0.571	(0.171) **
Heavy drinking			0.389	(0.187) *	0.373	(0.189) *	0.349	(0.200) ^
Illicit drug use			0.026	(0.345)	-0.031	(0.360)	-0.061	(0.353)
Neighborhood disadvantage			-0.092	(0.114)	-0.102	(0.119)	-0.112	(0.118)
Neighborhood percent white			0.007	(0.012)	0.006	(0.012)	0.006	(0.012)
Neighborhood percent black			0.005	(0.013)	0.005	(0.013)	0.006	(0.013)
Neighborhood percent Hispanic			0.000	(0.012)	0.000	(0.012)	0.000	(0.012)
Neighborhood social control			-0.039	(0.132)	-0.042	(0.136)	-0.049	(0.144)
Neighborhood social cohesion			-0.082	(0.210)	-0.067	(0.219)	-0.040	(0.218)
Cognitive skills			0.006	(0.039)	0.003	(0.040)	0.003	(0.040)
Impulsivity			0.293	(0.145) *	0.251	(0.137) ^	0.250	(0.138) ^
Ever stopped by police			0.133	(0.205)	0.062	(0.211)	0.055	(0.214)
Ever incarcerated			-0.293	(0.328)	-0.245	(0.327)	-0.232	(0.330)
Anxiety, lagged					1.138	(0.229) ***	1.139	(0.226) ***
<i>Father Characteristics</i>								
Race/ethnicity (reference = White [non-Hispanic])								
Black (non-Hispanic)			-0.121	(0.476)	-0.077	(0.473)	-0.107	(0.475)
Hispanic			0.063	(0.491)	0.060	(0.460)	0.053	(0.456)
Other race (non-Hispanic)			0.270	(0.511)	0.318	(0.501)	0.323	(0.498)
Foreign-born			-0.344	(0.433)	-0.348	(0.439)	-0.345	(0.451)
Age			0.016	(0.016)	0.017	(0.016)	0.018	(0.017)
Lived with both biological parents			-0.002	(0.213)	0.010	(0.214)	0.011	(0.221)
Repartnered			-0.237	(0.445)	-0.326	(0.431)	-0.267	(0.445)
Relationship quality			-0.114	(0.092)	-0.116	(0.089)	-0.117	(0.092)
Number of children in household			0.030	(0.102)	0.044	(0.103)	0.045	(0.104)

Table 3 (continued).											
Educational attainment (reference = less than high school)											
High school diploma or GED			0.043	(0.198)		-0.015	(0.190)		-0.003	(0.181)	
More than high school			-0.247	(0.231)		-0.304	(0.232)		-0.304	(0.237)	
Employed			0.064	(0.274)		0.074	(0.273)		0.074	(0.274)	
Income-to-poverty ratio			-0.027	(0.058)		-0.020	(0.058)		-0.024	(0.059)	
Material hardship			-0.053	(0.055)		-0.046	(0.057)		-0.046	(0.056)	
Parenting stress			-0.100	(0.164)		-0.094	(0.168)		-0.099	(0.167)	
Fair or poor health			0.063	(0.257)		0.081	(0.265)		0.091	(0.265)	
Heavy drinking			0.233	(0.239)		0.234	(0.246)		0.245	(0.245)	
Illicit drug use			-0.206	(0.275)		-0.200	(0.276)		-0.188	(0.274)	
Neighborhood disadvantage			0.073	(0.183)		0.082	(0.189)		0.078	(0.188)	
Neighborhood percent white			0.002	(0.014)		0.000	(0.014)		0.002	(0.134)	
Neighborhood percent black			0.002	(0.015)		0.000	(0.015)		0.001	(0.015)	
Neighborhood percent Hispanic			0.004	(0.016)		0.002	(0.014)		0.004	(0.016)	
Cognitive skills			0.026	(0.038)		0.023	(0.037)		0.018	(0.038)	
Impulsivity			0.016	(0.154)		0.026	(0.151)		0.023	(0.151)	
Ever stopped by police			0.059	(0.209)		0.031	(0.216)		0.023	(0.218)	
Ever incarcerated			0.712	(0.206)	**	0.709	(0.200)	***	0.713	(0.191)	***
<i>Adolescent Characteristics</i>											
Male			0.199	(0.181)		0.176	(0.180)		0.199	(0.178)	
Age			0.102	(0.127)		0.124	(0.119)		0.103	(0.118)	
Low birth weight			-0.069	(0.367)		-0.043	(0.356)		0.000	(0.365)	
Delinquency			-0.044	(0.056)		-0.039	(0.055)		0.044	(0.058)	
Impulsivity			0.101	(0.127)		0.117	(0.124)		0.059	(0.116)	
Peer delinquency									0.556	(0.362)	
Police officer regularly stationed at school									-0.390	(0.192)	^
Ever smoked									-0.282	(0.385)	
Ever drank alcohol without parents									0.048	(0.316)	
Ever used marijuana or other drug									-0.066	(0.255)	
Ever arrested									0.264	(0.353)	
Ever incarcerated									-0.577	(0.491)	
Log likelihood	-654		-574			-567			-564		
Constant	-3.007		-7.417			-7.455			-7.565		
N	3,063		3,063			3,063			3,063		
Notes: All models include city fixed-effects. ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.											

Table 4. Logistic Regression Models Estimating Mothers' Depression and Anxiety, with Variations on Adolescent Stop Measure

	Depression				Anxiety			
	Model 1		Model 2		Model 1		Model 2	
	<i>Number of stops</i>		<i>Intrusion index</i>		<i>Number of stops</i>		<i>Intrusion index</i>	
Number of stops	0.043	(0.016) **			0.060	(0.027) *		
Intrusion index			0.051	(0.054)			0.269	(0.095) **
Log likelihood	-326		-344		-161		-166	
Constant	-6.194		-5.681		-1.617		-0.280	
N	767		767		767		767	

Notes: All models adjust for control variables in Model 3 of Tables 2 and 3. * $p < .05$, ** $p < .01$.

Table 5. Logistic Regression Models Estimating Mothers' Depression and Anxiety as a Function of Mothers' Reports of Adolescent Police Stops, Considering Variation by Mothers' Prior Exposure to Criminal Justice Contact

	Mothers' depression		Mothers' anxiety		
Panel A. Mother prior police stops					
Mother stopped (n = 624)	0.182	(0.334)		1.515	(0.344) ***
Mother not stopped (n = 2,439)	0.680	(0.201) **		0.539	(0.250) *
Panel B. Father prior police stops					
Father stopped (n = 1,813)	0.449	(0.156) **		0.933	(0.191) ***
Father not stopped (n = 1,250)	1.081	(0.357) **		-0.144	(0.520)
Panel C. Mother prior incarceration					
Mother incarcerated (n = 222)	1.418	(1.147)		---	---
Mother not incarcerated (n = 2,841)	0.372	(0.181) *		0.608	(0.211) **
Panel D. Father prior incarceration					
Father incarcerated (n = 1,490)	0.599	(0.186) **		1.012	(0.236) ***
Father not incarcerated (n = 1,573)	0.448	(0.402)		-1.158	(0.667) ^

Notes: Coefficient for "adolescent stopped by police" presented. Models adjust for all control variables in Model 3 of Tables 2 and 3. All models include city fixed-effects. ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6. Logistic Regression Models Estimating Mothers' Depression and Anxiety as a Function of Mothers' Reports of Adolescent Police Stops, Considering Variation by Emotional Support

	Mothers' depression		Mothers' anxiety	
Emotional support (n = 2,745)	0.428	(0.158) **	0.509	(0.223) *
No emotional support (n = 318)	1.550	(0.639) *	1.806	(1.075) ^

Notes: Coefficient for "adolescent stopped by police" presented. Models adjust for all control variables in Model 3 of Tables 2 and 3. All models include city fixed-effects. ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix Table 1. Description of Variables Included in Analyses

Material hardship (1 = yes, 0 = no)

1. received free food or meals
2. were ever hungry, but didn't eat because you couldn't afford food
3. did not pay the full amount of rent or mortgage payments
4. were evicted from home or apartment for not paying rent or mortgage
5. did not pay the full amount of a gas, oil, or electricity bill
6. gas or electric service was turned off, or the heating company did not deliver oil, because there wasn't enough money to pay the bills
7. borrowed money from friends or family to help pay the bills
8. moved in with other people even for a little while because of financial problems
9. stayed at a shelter, in an abandoned building, an automobile or any other place not meant for regular housing, even for one night
10. there was anyone in your household who needed to see a doctor or go to the hospital but couldn't go because of the cost
11. your telephone service was ever disconnected by the telephone company because there wasn't enough money to pay the bill

Parenting stress (1 = *strongly disagree* to 4 = *strongly agree*, $\alpha = .66$ for mothers and $.65$ for fathers)

1. being a parent is harder than I thought it would be
2. I feel trapped by my responsibilities as a parent
3. I find that taking care of my children is much more work than pleasure
4. I often feel tired, worn out, or exhausted from raising a family

Neighborhood disadvantage ($\alpha = .74$ for mothers and $.77$ for fathers)

1. percent in neighborhood without college degree
2. percent in neighborhood unemployed
3. percent in neighborhood with household incomes below the poverty line
4. percent in neighborhood receiving public assistance).

Neighborhood social control (1 = *very unlikely* to 5 = *very likely*, $\alpha = .88$)

1. neighbors intervene if children were skipping school and hanging out at street corner
2. neighbors intervene if children were spray-painting graffiti on a local building
3. neighbors intervene if children were showing disrespect to an adult
4. neighbors intervene if a fight broke out in front of their house
5. neighbors intervene if the fire station closest to their house was threatened with budget cuts

Neighborhood social cohesion (1 = *strongly disagree* to 4 = *strongly agree*, $\alpha = .79$)

1. people around here are willing to help their neighbors
2. this is a close-knit neighborhood
3. people in this neighborhood can be trusted
4. people in this neighborhood generally don't get along with each other (reverse coded)
5. people in this neighborhood do not share the same values (reverse coded)

Impulsivity (1 = *strongly disagree* to 4 = *strongly agree*, $\alpha = .83$ for mothers, .84 for fathers, .79 for adolescents)

1. I often say what comes into my head without thinking
2. often, I don't think enough before I act
3. I often say/do things without considering the consequences
4. I often get in trouble because I don't think before I act
5. plans don't work out because I don't go over them carefully
6. I make up my mind without considering the situation from all angles

Delinquency (1 = yes, 0 = no)

1. purposely damaged or destroyed property that wasn't yours
2. taken or stolen something that didn't belong to you from another person or from a store
3. taken some money at home that did not belong to you, like from your mothers' purse or from your parents' dresser
4. cheated on a school test
5. had a fist fight with another person
6. hurt an animal on purpose
7. gone into somebody's garden, backyard, house, or garage when you were not supposed to be there
8. run away from home
9. skipped school without an excuse
10. secretly taken a sip of wine, beer, or liquor
11. smoked marijuana, grass pot, weed
12. smoked a cigarette or used tobacco
13. been suspended or expelled from school
14. written things or sprayed paint on walls or sidewalks or cars
15. purposely set fire to a building, a car, or other property or tried to do so
16. avoided paying for things such as moves, bus or subway rides, or food
17. thrown rocks or bottles at people or cars

Peer delinquency (1 = *never* to 3 = *often*, $\alpha = .85$)

1. friend smoked an entire cigarette
2. friend had a drink of beer, wine, or liquor more than two or three times
3. friend tried marijuana
4. friend tried other types of illegal or prescription drugs or other substances to get high
5. friend asked you to go drinking with them
6. friend gave or sold marijuana to you

7. friend deliberately damaged property that didn't belong to them
8. friend stole something worth more than \$50
9. friend used or threatened to use a weapon to get something from someone
10. friend sold marijuana or other drugs
11. friend stole something worth less than \$50

Appendix Table 2. Logistic Regression Model Estimating Mothers' Reports of Adolescent Police Stops

	b	(S.E.)
<i>Mother Characteristics</i>		
Race/ethnicity (reference = White [non-Hispanic])		
Black (non-Hispanic)	-0.579	(2.920)
Hispanic	-0.399	(0.305)
Other race (non-Hispanic)	-0.021	(0.441)
Foreign-born	-0.244	(0.346)
Age	-0.018	(0.018)
Lived with both biological parents	-0.338	(0.144) *
Relationship with adolescent's father (reference = married)		
Cohabiting	0.034	(0.280)
Not residential	0.064	(0.247)
Repartnered	-0.147	(0.161)
Relationship quality	-0.069	(0.068)
Number of children in household	0.034	(0.050)
Educational attainment (reference = less than high school)		
High school diploma or GED	0.302	(0.196)
More than high school	0.001	(0.177)
Employed	-0.045	(0.144)
Income-to-poverty ratio	-0.057	(0.057)
Material hardship	0.055	(0.042)
Parenting stress	0.354	(0.098) ***
Fair or poor health	0.143	(0.178)
Heavy drinking	0.458	(0.195) *
Illicit drug use	-0.254	(0.266)
Neighborhood disadvantage	0.054	(0.091)
Neighborhood percent white	0.021	(0.013)
Neighborhood percent black	0.016	(0.012)
Neighborhood percent Hispanic	0.020	(0.012)
Neighborhood social control	0.137	(0.094)
Neighborhood social cohesion	-0.054	(0.156)
Cognitive skills	0.004	(0.027)
Impulsivity	0.015	(0.112)
Ever stopped by police	-0.026	(0.156)
Ever incarcerated	0.278	(0.216)
<i>Father Characteristics</i>		
Race/ethnicity (reference = White [non-Hispanic])		
Black (non-Hispanic)	0.617	(0.318)
Hispanic	0.032	(0.339)
Other race (non-Hispanic)	0.558	(0.441)
Foreign-born	-0.211	(0.333)
Age	-0.004	(0.015)
Lived with both biological parents	0.104	(0.160)
Repartnered	-0.423	(0.399)
Relationship quality	-0.005	(0.069)
Number of children in household	0.167	(0.085) *
Educational attainment (reference = less than high school)		
High school diploma or GED	-0.319	(0.171)
More than high school	-0.168	(0.177)
Employed	-0.203	(0.174)
Income-to-poverty ratio	-0.001	(0.045)
Material hardship	-0.016	(0.050)

Appendix Table 2 (continued).			
Parenting stress	0.181	(0.131)	
Fair or poor health	0.097	(0.206)	
Heavy drinking	-0.058	(0.190)	
Illicit drug use	0.174	(0.121)	
Neighborhood disadvantage	-0.020	(0.135)	
Neighborhood percent white	-0.014	(0.015)	
Neighborhood percent black	-0.010	(0.014)	
Neighborhood percent Hispanic	-0.007	(0.013)	
Cognitive skills	0.017	(0.030)	
Impulsivity	-0.105	(0.151)	
Ever stopped by police	0.077	(0.149)	
Ever incarcerated	0.444	(0.155)	**
<i>Adolescent Characteristics</i>			
Male	0.923	(0.134)	***
Age	0.331	(0.103)	**
Low birth weight	0.045	(0.217)	
Delinquency	0.103	(0.034)	**
Impulsivity	0.449	(0.098)	***
Constant	-10.761		
N	3,063		
Note: Model also includes city fixed-effects. * $p < .05$, ** $p < .01$, *** $p < .001$.			

Appendix Table 3. Covariate Balance After Matching				
	Matched mean			
	$E(X) d = 1$	$E(X) d = 0$	p	$Bias$
<i>Mother Characteristics</i>				
Race/ethnicity				
White (non-Hispanic)	0.162	0.159	0.875	0.9
Black (non-Hispanic)	0.611	0.606	0.861	1.1
Hispanic	0.194	0.199	0.885	-1.0
Other race (non-Hispanic)	0.032	0.037	0.718	-2.7
Foreign-born	0.062	0.068	0.733	-2.0
Age	32.655	32.763	0.780	-1.9
Lived with both biological parents	0.291	0.297	0.848	-1.4
Relationship with adolescent's father				
Married	0.172	0.188	0.570	-3.8
Cohabiting	0.096	0.103	0.763	-2.3
Not residential	0.732	0.709	0.493	4.9
Repartnered	0.402	0.390	0.737	2.5
Relationship quality	2.335	2.401	0.526	-4.6
Number of children in household	2.956	2.940	0.841	1.1
Educational attainment				
Less than high school	0.245	0.246	0.884	-0.4
High school diploma or GED	0.220	0.210	0.735	2.6
More than high school	0.535	0.544	0.816	-1.8
Employed	0.594	0.591	0.876	0.7
Income-to-poverty ratio	1.442	1.465	0.844	-1.1
Material hardship	2.006	1.961	0.749	2.3
Parenting stress	2.246	2.227	0.725	2.7
Fair or poor health	0.227	0.230	0.847	-0.8
Heavy drinking	0.148	0.151	0.858	-0.9
Illicit drug use	0.075	0.075	0.825	-0.1
Neighborhood disadvantage	0.155	0.143	0.848	1.2
Neighborhood percent white	32.475	33.104	0.780	-2.0
Neighborhood percent black	40.090	40.180	0.891	-0.2
Neighborhood percent Hispanic	21.291	20.481	0.669	3.2
Neighborhood social control	3.172	3.176	0.895	-0.5
Neighborhood social cohesion	2.714	2.722	0.791	-1.8
Cognitive skills	6.658	6.629	0.854	1.1
Impulsivity	2.115	2.109	0.859	1.0
Ever stopped by police	0.260	0.261	0.896	-0.3
Ever incarcerated	0.126	0.126	0.883	0.1
<i>Father Characteristics</i>				
Race/ethnicity				
White (non-Hispanic)	0.108	0.111	0.919	-0.6
Black (non-Hispanic)	0.668	0.658	0.773	2.1
Hispanic	0.192	0.199	0.814	-1.7
Other race (non-Hispanic)	0.031	0.032	0.902	-0.6
Foreign-born	0.079	0.082	0.853	-1.0
Age	35.053	35.090	0.888	-0.6
Lived with both biological parents	0.361	0.365	0.849	-0.8
Repartnered	0.037	0.036	0.860	0.3
Relationship quality	2.843	2.881	0.705	-2.8
Number of children in household	1.244	1.257	0.827	-0.9

Appendix Table 3 (continued)				
Educational attainment				
Less than high school	0.339	0.321	0.607	3.9
High school diploma or GED	0.308	0.312	0.869	-0.8
More than high school	0.353	0.367	0.693	-2.9
Employed	0.592	0.601	0.802	-2.0
Income-to-poverty ratio	1.842	1.860	0.839	-0.7
Material hardship	1.746	1.721	0.791	1.2
Parenting stress	2.057	2.040	0.746	2.4
Fair or poor health	0.183	0.181	0.838	0.4
Heavy drinking	0.291	0.291	0.870	0.1
Illicit drug use	0.213	0.209	0.817	1.0
Neighborhood disadvantage	0.173	0.170	0.845	0.4
Neighborhood percent white	29.703	30.188	0.807	-1.6
Neighborhood percent black	43.401	43.201	0.872	0.6
Neighborhood percent Hispanic	20.485	20.145	0.840	1.3
Cognitive skills	6.396	6.437	0.819	-1.5
Impulsivity	2.076	2.069	0.818	1.0
Ever stopped by police	0.692	0.679	0.723	2.6
Ever incarcerated	0.710	0.693	0.614	3.6
<i>Adolescent Characteristics</i>				
Male	0.698	0.697	0.934	0.1
Age	15.792	15.784	0.854	1.0
Low birth weight	0.101	0.101	0.890	-0.1
Delinquency	1.964	1.946	0.852	0.9
Impulsivity	2.693	2.686	0.865	1.1
Notes: $E(X) d = 1$ indicates means for treatment group (mothers report adolescent stopped by the police). $E(X) d = 0$ indicates means for control group (mothers report adolescent not stopped by the police). Post-match estimates based on kernel matching.				

Appendix Table 4. Propensity Score Matching Models Estimating the Association between Mothers' Reports of Adolescent Police Stops and Mothers' Mental Health

	Unmatched estimates			Matched estimates			Matched estimates (with endogenous characteristics)			Matched estimates (doubly robust)		
Depression	0.851	(0.124)	***	0.475	(0.154)	**	0.412	(0.183)	*	0.550	(0.162)	**
Anxiety	1.092	(0.179)	***	0.570	(0.237)	*	0.558	(0.259)	*	0.788	(0.246)	**

Notes: All estimates are restricted to the region of common support. Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix Table 5. Sensitivity Analysis for the Association between Mothers' Reports of Adolescent Police Stops and Mothers' Mental Health (Assuming Overestimation of Mothers' Reports of Adolescent Police Stops)

Depression		Anxiety	
Gamma (ρ)	p	Gamma (ρ)	p
1.0	< .001	1.0	< .001
1.1	< .001	1.1	< .001
1.2	< .001	1.2	< .001
1.3	< .001	1.3	< .001
1.4	< .001	1.4	< .001
1.5	< .001	1.5	< .001
1.6	.001	1.6	< .001
1.7	.006	1.7	< .001
1.8	.019	1.8	.002
1.9	.051	1.9	.006
2.0		2.0	.013
2.1		2.1	.026
2.2		2.2	.047
2.3		2.3	.077

Note: P-values exceeding .05 are omitted (unless they were the point where the relationship became statistically insignificant at the .05 level), which shows where the relationships become statistically insignificant).