



Published in final edited form as:

Crime Delinq. 2018 October 01; 64(11): 1437–1457. doi:10.1177/0011128717718487.

Trauma, Race, and Risk for Violent Felony Arrests Among Florida Juvenile Offenders

Micah E. Johnson¹

¹University of Florida, Gainesville, FL, USA

Abstract

This study tests the assumptions of the The Childhood Trauma Model, which proposes that marginalized populations are both more likely to have traumatic childhoods and more criminalized than those in the upper echelons of society. It hypothesizes that traumatic childhood experiences increase risk of being sanctioned for violent behavior, and risks are amplified for minority and disadvantaged groups. The study finds that experiencing three or more traumas had a 200% to 370% increased chance of being arrested for a violent felony as youth who experienced a single traumatic event, and Blacks had up to 300% increased risk than Whites with equal trauma scores.

Keywords

juvenile delinquency; minorities; domestic violence; offending

Children in the criminal justice system are some of America's most traumatized children. Yet children's externalizing behaviors are often criminalized rather than treated as a mental health issue, especially for minority children. Disadvantaged groups are both more likely to have traumatic childhoods and are more policed and stigmatized. Differential trauma exposure and racial dynamics may predict who is more likely to be arrested for serious violent offenses, such as violent felonies.

Research has shown that an early onset of violence is associated with more serious and chronic violence (Moffitt, 1993; Tolan & Thomas, 1995). Farrington (1995) found that one half of boys who adjudicated delinquent for a violent offense between age 10 and age 16 were convicted of a violent crime by age 24. Apart from increased risk of recidivism, criminal conviction, especially as a juvenile, brings with it a host of sanctions and disqualifications that hinders an individual's access to resources needed for healthy development. These burdens can be widespread and lasting, and are most intense for youth with violent felony arrests (VFA). The collateral consequences of violent felony adjudications affect a person's employment, education, and business opportunities (Colgate Love, Roberts, & Klingele, 2013). These include denied access to government benefits

Reprints and permissions: sagepub.com/journalsPermissions.nav

Corresponding Author: Micah E. Johnson, Department of Epidemiology, College of Public Health and Health Professions and College of Medicine, University of Florida, P.O. Box 100231, Gainesville, FL 32610, USA. MicahJohnson3000@gmail.com.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

and program participation, including student loans, housing, contracting, and other forms of participation in civic life. The consequences also extend to restrictions on family relationships and living arrangements, such as child custody, fostering, and adoption (Colgate Love et al., 2013). Furthermore, the stigma of being labeled a violent felon can burden an individual for the rest of their lives. Publication of an individual's criminal record and mandated disclosures make it nearly impossible to evade stigma and experience life without such restraints, even for those with expunged records or adjudication withheld (Colgate Love et al., 2013; Wheelock, 2005). Early justice involvement is a powerful risk factor for long-term hardships, representing children with more traumatic childhoods and at higher risk of serious offending.

Childhood trauma refers to a deeply distressing or disturbing experience or condition occurring during the pre-adulthood stages of development. Exposure to traumatic experiences in childhood is among the most important causes of early violent behavior (Baglivio, Wolff, Piquero, & Epps, 2015; Crooks, Scott, Wolfe, Chiodo, & Killip, 2007; Fox, Perez, Cass, Baglivio, & Epps, 2015). I hope to build and test a sociological theory of childhood trauma, which I call the Childhood Trauma Model (CTM). This framework links societal factors to trauma exposure, risks and resources, and diverse manifestations of distress. I submit that children's location in society largely influences (a) their experiences and the quality of their childhood; (b) the manner in which their behavior and health is interpreted and managed; and (c) their access to resources that may promote healthy development and adaptation. Using CTM, I hypothesize that justice-involved children (JIC) who experience more trauma will have a higher risk for VFA, and the effects of trauma on risk for VFA will be higher for minority children.

In the subsequent sections, I will first review CTM, supporting its propositions with relevant literature. Second, I will describe the methodology that I use to test CTM's hypotheses. Third, I will present the findings and my interpretations. In the "Conclusion" section, I will conclude by providing a synopsis and recommendations for future research.

Background: The CTM

Societal Factors

The CTM emphasizes children and their upbringings in understanding children's health and behavioral issues. It has three main components: the trauma, the symptom of distress, and the risk and/or resources. It is the first model that links the broader social structure to childhood trauma, the toxicity of trauma, the risks and resources that alter the effects of trauma, and the trauma-induced symptoms of distress. CTM proposes that childhood trauma is a mechanism by which ascriptive inequality occurs and social positions remain relatively consistent across generations. The quality of an individual's childhood is influenced by the major characteristics and organizing systems of American society: including the economic and social policies, the availability of health care services, and the social and cultural norms such as patriarchy, racism, violence, and the subordination of children. The social positions and locations that individuals occupy during their childhood influence the amount of trauma they are exposed to, their access to risks and resources that may alleviate or exacerbate the impact of trauma, and the way that distress is manifested, interpreted, and managed.

Individuals who are on the lower tiers of society are subject to more traumatic circumstances and less protective resources throughout their lives, which obstructs healthy development and breeds unhealthy behaviors (Foster & Brooks-Gunn, 2009).

Children in Distress

About one in four Americans are younger than 18 years, the age group commonly referred to as juveniles. In the pre-adulthood stages of development, individuals have biosocial sensitivities to positive or negative experiences. According to CTM, specific and multiple traumatic childhood experiences can cause drastic, lasting, and/or permanent adverse changes in one's health and behavior. The model proposes that many behavioral and mental ailments are symptoms of trauma-induced distress. Distress refers to a state of extreme anxiety, sorrow, and/or pain. There are five key domains that constitute the psychosomatic symptoms of distress: performance, conduct, physical, psychological, and coping and expression. For the purpose of this study, I focus on the conduct domain of distress. It pertains to declines or deviations in moral behavior. Indicators of conduct-related symptoms of distress include risky behavior, running away or withdrawal, delinquency and crime, and violence and aggression. In this model, children with more severe externalizing behavior, such as a violent felony offense, may represent those with a more toxic trauma exposure.

Childhood Trauma

Some researchers use the terms stress, maltreatment, victimization, or adverse childhood experiences in referring to a traumatic event (Richmond, Elliott, Pierce, Aspelmeier, & Alexander, 2009; Schafer, Ferraro, & Mustillo, 2011; Turner & Lloyd, 1995). The term *trauma* denotes that the experiences are more severe than ordinary stressors, yet is broad enough to include multiple forms of disturbances. There are two main domains of childhood trauma in CTM, adversity and victimization. Adversity-related trauma comprises deeply distressing difficulties, misfortunes, and hardships that occur throughout childhood. Indicators of adversity-related trauma include household addiction, exposure to violence, household mental illness, close relative or companion loss (from death, divorce, breakup, etc.), close relative or companion abuse and/or victimization, extreme poverty, and accidents/disasters. Victimization-related trauma refers to the deeply distressing psychological and/or physical interpersonal abuses experienced in childhood. Indicators of victimization-related trauma include experiencing sexual abuse, verbal abuse, violent victimization, emotional neglect and abuse, and physical neglect and abuse. Recent studies found that 90% of juvenile offenders in the United States experience some sort of traumatic event in childhood, and up to 30% of JIC meet the clinical criteria for posttraumatic stress disorder (Dierkhising et al., 2013). Decades of research show that various types of childhood trauma significantly increase the likelihood of violent offending.

Poverty and disadvantage are critical predictors of youth crime and violence (McAra & McVie, 2016). Early studies showed that low family income predicted teen violence and convictions for violent offenses (Henry, Caspi, Moffitt, & Silva, 1996), and youth who live in poverty are more likely to be arrested for felony assault and robbery than their more privileged peers (Elliott, Huizinga, & Menard, 1989). Living in a community with a high

prevalence of drugs and firearms fosters violent behaviors (Herrenkohl et al., 2000). These conditions predispose children to further victimizations and adversity.

For decades, child abuse and neglect has been linked to violence among JIC (Dodge, Bates, & Pettit, 1990; Maxfield & Widom, 1996; C. Smith & Thornberry, 1995). Maxfield and Widom (1996) found that experiencing abuse during childhood increased the odds of juvenile violent behavior by more than 200%. In a sample of 301 convicted adult male felons, Weeks and Widom (1998) found that violent felony offenders reported significantly more childhood neglect than nonviolent offenders but not more physical abuse. In a sample of sexual offenders, Levenson and Socia (2016) found that child sexual abuse and emotional neglect in the childhood home were significant predictors of a higher number of sex crime arrests. Exposure to violence, in the home and elsewhere, is a well-documented cause of violent behavior (Cuevas, Finkelhor, Shattuck, Turner, & Hamby, 2013; Franzese, Menard, Weiss, & Covey, 2016; Herrera & McCloskey, 2001; Jonson-Reid, 1998). Community crime and violence is consistently linked to juvenile delinquency and violent behavior (Bernat, Oakes, Pettingell, & Resnick, 2012; Chen, Voisin, & Jacobson, 2016; Flannery, Singer, & Wester, 2003; Resnick, Ireland, & Borowsky, 2004; Stewart & Simons, 2006). Herrenkohl et al. (2000) found that children who knew many adult criminals were more likely to engage in violent behavior by age 18.

Evidence suggests that having a household member who suffers from addiction (Boles & Miotto, 2003) or a mental illness (Hiday, 1995) increases the risk of violent behavior, though these links are much more complex. Also, losing a close relative or companion due to death, divorce, breakup, incarceration, or otherwise is a strong predictor of engaging in violence (Farrington, 1989). Nearly three decades ago, scholars found that parent-child separation before age 10 predicted violence (Farrington, 1989). Henry et al. (1996) found that having a single-parent family when boys were age 13 predicted their convictions for violence by age 18. Specifically, exposure to parental incarceration has been linked to delinquent behaviors (Geller, Garfinkel, Cooper, & Mincy, 2009; Murray & Farrington, 2008). In the Cambridge Study of Delinquent Development, Murray and Farrington (2005) found that parental imprisonment predicted antisocial and delinquent outcomes up to age 32, even after controlling for other childhood risk factors. These studies and others have identified the major types of trauma that predict violent behavior; however, much of the research has neglected the toxicity of trauma.

Toxicity

The toxicity of trauma refers to the relative or specific capacity for trauma to produce symptoms of distress. Measuring toxicity helps capture, more accurately, the impact of trauma and explain variation in the likelihood of violent behavior among youth with seemingly related trauma profiles and risk factors. CTM stipulates three key domains of toxicity: frequency, severity, and accumulation. Accumulation toxicity refers to the mass or quantity of diverse traumatic childhood experiences. The accumulation domain captures the toxicity of experiencing multiple kinds of trauma—though the variety of abusers could be an indicator of intra-trauma accumulation toxicity. Accumulation toxicity can be measured through main, multiplicative, or additive effects.

Cumulative trauma.—Focusing on individual types or a few types of trauma uncovers important nuances and item-specific relationships that may be lost in aggregated indices. A child may have a unique sensitivity to a specific type of trauma that is more toxic alone or specific types of trauma may be more harmful for certain outcomes than multiple other traumas combined. However, exposure to multiple adverse experiences can have an exponentially more harmful effect (Felitti, Anda, Nordenberg, & Williamson, 1998). The impact of trauma on violent criminality may be underestimated in studies that solely measure the effects of individual types of trauma without considering the toxicity of accumulating traumatic experiences throughout an individual's life (Finkelhor, Ormrod, & Turner, 2007; Turner & Lloyd, 1995). CTM proposes that multiple traumatic experiences accumulate throughout childhood and subsequent developmental stages, which can significantly increase the likelihood of violent behavior and/or the likelihood of being arrested for a violent offense. In a study of 22,575 delinquent youth in the Florida Department of Juvenile Justice (FLDJJ), Piquero, Farrington, and Blumstein (2003) found that each additional traumatic experience increases the risk of becoming a serious, violent, and chronic juvenile offender by more than 35%, while considering all control variables.

Risk and resources.—CTM proposes that there are multilevel risks and resources that can modify the effects of trauma exposure. Risks and resources refer to any attribute, characteristic, or exposure that alters the effect of trauma and the likelihood or degree of experiencing distress. Risks exacerbate the effects of trauma while resources attenuate the effects of trauma. There are four main levels of risks and resources: individual, family, community or school, and societal. Individual-level risks and resources include sensitivity or susceptibility, prosocial social bonds, life skills and resourcefulness, social integration and involvement, confidence and efficacy, prosocial aspirations, and reputation. Risks and resources that alter the effect of trauma at the family-level include family socioeconomic status (SES), connectedness, and expectations, and parenting characteristics (Bernat et al., 2012; Resnick et al., 2004; Thompson et al., 2014). School and community-level indicators of risks and resources include SES, culture and norms, safety and pollution, and support and social ties (Bowles & Gintis, 2002; Massey & Denton, 1993; Wilson, 2012). Societal-level risks and resources include the macro-level policies, cultures, and norms that help or hurt children who are exposed to trauma, such as systems and policies that create racial disparities in the criminal justice system.

Black and Latina/os.—The most commonly cited risks and resources relating to violent criminality include race, male gender, SES, parental supervision, mental health, low academic achievement, early misconduct, substance use, early aggression, low self-control, and impulsivity. Race is a critical element in predicting youth violence and felony arrest (Rojas-Gaona, Hong, & Peguero, 2016; Sampson, Morenoff, & Raudenbush, 2005; Sutton, 2013). Blacks and Latina/os are the victims of institutional racism and discrimination that perpetuate racial inequalities, and schools and the criminal justice system play an especially critical role (Alexander, 2010; Heitzeg, 2016; Nicholson-Crotty, Birchmeier, & Valentine, 2009; Perry & Morris, 2014; Rojas-Gaona et al., 2016). Black and Latina/o children are overrepresented at all stages of the legal process, from initial contact to conviction and sentencing (Alexander, 2010; Rios, 2011). Their misbehavior in school (Perry & Morris,

2014) and symptoms of distress (Slate & Johnson, 2008) are too often perceived and treated as criminal behavior. These kids are disproportionately suspended from school and many of them enter the juvenile justice system as a result of school misbehavior (Nicholson-Crotty et al., 2009; Perry & Morris, 2014; Rios, 2011). Being a minority child in the juvenile justice system intensifies trauma-induced distress, and this condition has dire life consequences. The mass incarceration of minority males, particularly, diminishes many family and community-level resources for minority children, while simultaneously exposing them to the trauma of losing a household member or companion to incarceration (Alexander, 2010). Furthermore, as discussed previously, the collateral consequences of justice involvement affect all the critical domains of an individual's life and proliferate to negatively impact their loved ones and community members.

Other risk and resources.—In addition to race, in studies of delinquency and violence, class and gender are established predictors and moderators of violent behavior (Gibson & Krohn, 2013; Massetti et al., 2011; Sampson & Laub, 2005). Also, parent supervision is a central factor that influences child behavior. Youth aggression and violence is more prevalent when parents fail to provide adequate supervision (Massetti et al., 2011; Stewart & Simons, 2006). Moreover, early mental health issues (Sawyer et al., 2012; Wheaton & Clarke, 2003), academic underachievement (Hirschfield & Gasper, 2011; Hoffmann, Erickson, & Spence, 2013; Wang & Fredricks, 2014), and exclusionary punishment at school (Bernat et al., 2012; Resnick et al., 2004) are documented predictors and moderators of later violent behavior and offending.

Addiction and substance abuse is a known root-cause of violence and criminality (Boles & Miotto, 2003; Resnick et al., 2004; P. D. Smith, Pope, Calderera, & Lashus, 1993; Weiner, Sussman, Sun, & Dent, 2005). Adolescents with drug and substance abuse histories may have impaired cognitive functioning, diminished coping skills, antisocial peers, unfavorable reputations, and employ aggressive means of stress and conflict management (Boles & Miotto, 2003).

Aggressive proclivities in children are a precursor for later antisocial behavior (Gibson & Krohn, 2013; Korbin, 2003; White & Widom, 2003). Research suggests that baseline differences in verbal and physical aggression may attenuate the potential links between trauma and VFA.

Research on adolescent violence also suggests that self-control is an important predictor of aggression and violent behavior. Low self-control is associated with impulsivity, risky behavior, and criminal behavior (Bjorkly, 2013; Massetti et al., 2011). Those with low self-control have difficulty managing their emotions, act without thinking, lack empathy, and disregard the consequences of their actions (Chapple, Tyler, & Bersani, 2005; Gibson, 2012; Gibson, Fagan, & Antle, 2014). Impulsivity has particularly been linked to violence and antisocial behavior. There are other risks and resources that influence violent behavior, such as collective efficacy (Browning, 2002; Morenoff, Sampson, & Raudenbush, 2001; Sampson, Morenoff, & Earls, 1999), but these factors extend beyond the scope and capacity of the current study.

This study makes important empirical and theoretical innovations among an understudied and underserved population, JIC. Despite the great amount of research linking trauma to delinquency, very few studies have tested whether trauma predicts VFA among JIC. This study was the very first to longitudinally test whether childhood trauma increases the chances of VFA among Florida JIC, and also one of few that tests race differences in trauma effects. Most studies of trauma and violence examine individual types of trauma. Typically, they do not (a) measure the frequency or severity of the specific incident, (b) compare the impact of diverse types of trauma, (c) consider cumulative effects, or (d) test trauma by race interactions.

Method

Population

Using data from the FLDJJ, I investigated whether JIC who experience childhood trauma were more likely to be arrested for a violent felony, and whether these effects were heightened for Blacks and Latina/os. During intake, all youth in the FLDJJ system are administered the Positive Achievement Change Tool¹ (PACT) assessment. Depending on their level of risks, they receive either the prescreen or the full assessment (see Baglivio et al., 2014; Fox et al., 2015). The PACT Full Assessment records data on trauma and criminogenic predictors and additional data relevant to testing CTM.

The sample was drawn from the entire population of juveniles in FLDJJ from 2004 to 2016. FLDJJ selected all juveniles who (a) received one or more official referrals for delinquency (equivalent of an adult arrest²) before the age of 16; (b) completed the (PACT) Full Assessment³ at least once in 2007 and 2008; (c) reached the age of 18 by year 2016. A cohort of 3,284 twelve- to 16-year-old juveniles met the selection criteria. Roughly 17.5% were females and 82.5% were males. Nearly 58% of subjects were non-Latina/o/a Black or African American ($n = 1,911$), 31% were non-Latina/o/a White ($n = 1,018$), 10% Latina/o/a ($n = 343$), and less than 1% was another race ($n = 12$). The mean age in 2007 was 14.

Measures

VFA.—VFA was measured via a dichotomous variable. It was derived from a three-item ordinal variable that reported the number of against-person felony offenses. I recoded the variable into a dichotomous measure. Response values were coded as follows: 0 = *no against-person felony charges* and 1 = *yes, one or more against-person felony charges*.

Childhood trauma.—This study examined the effects of 11 types of childhood trauma. Six were adversity-related types of trauma: family violence, household substance abuse,

¹The Positive Achievement Change Tool (PACT) instrument has been validated across multiple samples of FLDJJ data published in several peer-reviewed journals (Baglivio & Jackowski, 2013). Trained FLDJJ staff conducted semistructured open-ended interviews using the PACT software. The interface guided all aspects of data collection; it included open-ended questions, an interview guide, the PACT manual, and coding techniques. Additional data are obtained from multiple informants and sources including caseworker reports, medical documentation, and data from other agencies.

²A nontraffic misdemeanor or felony that resulted in diversion, adjudication withheld, adjudication, deferred prosecution or transfer to adult court.

³Only the PACT Full Assessment included all 10 traumas, but youth who were at low or moderate risk to reoffend may have received the pre-PACT, instead. Therefore, more serious delinquents may be overrepresented in sample.

household mental illness, parental separation or divorce, household member incarceration, and community violence. Five were victimization-related types of trauma: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. For each trauma type, response options were dichotomized (0 = *no, this did not occur*, 1 = *yes, this experience occurred*). There are many other types of childhood trauma, but these were the most commonly reported in the adverse childhood experiences studies and the items collected by FLDJJ.

Cumulative trauma, a measure of accumulation toxicity, was operationalized via a ratio variable. The 11 dichotomous measures of childhood trauma were summed to create an additive cumulative trauma index ranging from 0 (*zero types of trauma*) to 11 (*11 types of trauma*). Each type of trauma counts as one. The data do not provide information on the frequency and severity domains of toxicity.

Risk and resources.—Race was treated as a proxy measure of societal-level risks and resources that may moderate the impact of trauma on the likelihood of VFA. Race and ethnicity were measured via a four-item nominal variable (0 = *White*, 1 = *Black*, 2 = *Latina/o/a*, 3 = *Other*) and gender was a dichotomous measure (0 = *male*, 1 = *female*). The effects of 11 other relevant risks and resources will be considered in the models including gender, age, family income, parental supervision, academic achievement, school suspensions, substance use, physical and verbal aggression, self-control, and impulsivity.⁴

Analytical Procedures

I conducted univariate and bivariate analysis to examine and describe the data. Then, I ran regression models predicting the impact of individual and cumulative trauma and race at baseline (year 2007) on the likelihood of VFA at follow-up (year 2008). I tested the moderating effects of race using two-way interaction terms between race and the 11 trauma items and then the trauma index. To interpret the interaction coefficients, I estimated the predictive margins in the odds ratio (OR) metric, plotted the data, and then computed the ORs. All models included 11 control variables. I ran several pre/post estimations to assess the assumptions of logistic regression and the integrity of the findings.

Findings

This section provides the results from testing three key assumptions of the CTM: (a) whether experiencing individual types of trauma statistically significantly increases the likelihood of VFA, (b) whether experiencing multiple types of trauma has a statistically significant higher likelihood of felony arrests than experiencing a single traumatic event, and (c) whether

⁴4 Gender (binary; 0 = *male*, 1 = *female*), family income (four-item ordinal; 0 = *under US\$15,000*, 1 = *US\$15,000 to US\$34,999*, 2 = *US\$35,000 to US\$49,999*, 3 = *US\$50,000 and over*), parental supervision (three-item categorical; 0 = *consistent or good supervision*, 1 = *sporadic supervision*, 2 = *inadequate supervision*), GPA (four-item ordinal; 0 = *below 1.0*, 1 = *1.1–2.0*, 2 = *2.1–3.0*, 3 = *4.0 or honor student*), school suspensions (six-item ordinal; 0 = *zero*, 1 = *one*, 2 = *two or three*, 3 = *four or five*, 4 = *six or seven*, 5 = *more than seven*), substance use (binary; 0 = *no, not currently using substances*, 1 = *yes, currently using substances*), physical aggression (four-item ordinal; 0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*) and verbal aggression (four-item ordinal; 0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*), self-control (three-item ordinal; 0 = *can avoid or stop antisocial behavior*, 1 = *can somewhat control antisocial behavior*, 2 = *cannot control behavior*), and impulsivity (four-item categorical variable; 0 = *no problems with impulsivity*, 1 = *does not know techniques to control impulsive behavior*, 2 = *knows techniques to control impulsivity*, 3 = *uses techniques to control impulsivity*).

individual and cumulative effects on risks for VFA are significantly higher for Blacks and Latina/o/as than their White counterparts.

Descriptive Statistics and Bivariate Analysis

About 48% of the sample had a VFA in 2008, compared with 5% of the nation's youth that same year (Gottesman & Schwarz, 2011). In the sample, approximately 56% of youth with a VFA were Black, 44% were Latina/o/a, and 36% were White. The most common types of trauma were physical neglect (83%), household member mental illness (93%), and parent separation (89%). Roughly 98% of the sample reported one or more traumatic events, and the average trauma score was 3.98. Youth with felony offenses had an average trauma score of 4.04 ($SD = 1.92$) and those that did not had an average trauma score of 3.92. Whites, Blacks, and Latina/os had an average trauma score of 4.25, 3.87, and 3.7, respectively. For complete descriptive statistics, see Tables 1 and 2.

Individual Trauma

I estimated models testing the effect of each trauma item on the likelihood of VFA. Physical neglect, Pseudo $R^2 = .57$, $\chi^2(30) = 2,553$, $p < .001$; OR = 1.51, $p = .022$; household substance abuse, Pseudo $R^2 = .57$, $\chi^2(30) = 2,551$, $p < .001$; OR = 0.72, $p = .037$; and witnessing community violence, Pseudo $R^2 = .57$, $\chi^2(30) = 2,560$, $p < .001$; OR = 1.57, $p = .000$, were statistically significant predictors of VFA⁵ in 2008, when also considering race, gender, family income, parent supervision, school suspensions, verbal aggression, physical aggression, self-control, impulsivity, and VFA in 2007. All other trauma items had no independent effect on VFA. Also, there was no statically significant difference in VFA between Latina/os and Whites. However, Blacks were statistically significant in all 11 models. Blacks were on average about 1.8 times more likely to have a VFA than Whites across all models.

Accumulation Toxicity: Cumulative Effects

To test whether the trauma items had accumulating effects, I estimated a fully specified model using the trauma index as the primary predictor variable. To compare the toxicity of experiencing multiple traumas with experiencing a single trauma, I ran an identical model and treated the trauma index as a categorical variable with a trauma score of 1 as the reference group. The trauma index was a statistically significant predictor of VFA, Pseudo $R^2 = .57$, $\chi^2(31) = 2,562$, $p < .001$; OR = 1.13, $p = .001$, indicating that the likelihood of a VFA increased 13% for a one-unit increase in the trauma score. Trauma score of 3, 5, 6, and 7 were statistically significantly different than a score of 1, Pseudo $R^2 = .57$, $\chi^2(40) = 2,575$, $p < .001$, providing some support that multiple traumas are more toxic than an individual trauma. Youth with a trauma score of 3 were 1.8 times more likely to have a VFA than youth with a trauma score of 1 (OR = 1.78, $p = .018$), and youth with a trauma score of 7 were 3.7 times more likely to have a VFA than youth with a trauma score of 1 (OR = 3.67, $p = .000$). Also, race remained significant. Blacks were roughly 1.8 times as likely (OR = 1.77, $p = .000$) as Whites, but VFAs for Latina/o/as were not significantly different than Whites.

⁵I also created and tested a four-level index using only the three significant trauma items. Higher scores were not statistical significantly different from a score of one.

Risks and Resources: Moderating Effects of Race

To test whether the effects of specific types of trauma on VFA were amplified for minorities, I estimated the interaction effects between each of the 11 trauma items and each of two binary race variables (Black-White and Latina/o-White). Only the interaction between emotional abuse and the Black-White variable, and emotional neglect and the Black-White variable were significant (as indicated in the main effects models, none of the Trauma \times Latina/o interaction terms were significant). Blacks who reported being emotionally abused in 2007 were 4.5 times more likely to have a VFA in 2008 as Whites who reported emotional abuse, Pseudo $R^2 = .57$, $\chi^2(30) = 2,298$, $p < .001$; OR = 4.53, $p = .000$; and Blacks who were emotionally neglected were also 3.5 times more likely than Whites who were emotionally neglected, Pseudo $R^2 = .57$, $\chi^2(30) = 2,304$, $p < .001$; OR = 4.46, $p = .000$), while controlling for gender, age, family income, parent supervision, school suspensions, verbal and physical aggression, self-control, impulsivity, and VFA in 2007.

Finally, I tested whether the cumulative effects of trauma on VFA were amplified for minorities by estimating two models testing interaction effects between the trauma index and each of the two binary race variables. The Trauma \times Black interaction term was significant, Pseudo $R^2 = .58$, $\chi^2(30) = 2,309$, $p < .001$; $r = .14$, $p = .038$. As indicated in Figure 1, for each unit increased in trauma scores, Blacks were significantly more likely to have a VFA, than Whites. Blacks with a trauma score of 5 were 1.5 times as likely to have a VFA as Whites with a trauma score of 5 (OR = 1.5, $p = .000$).

Conclusion

Perhaps the current state of juvenile justice should be considered a public health issue—because exposure to childhood trauma is linked to VFA—and a social justice issue—because these risks are elevated for Black children. As CTM proposed, individual and cumulative trauma were linked to VFA. On average, the likelihood of a VFA increased by 11% for each additional trauma experienced. Youth who experienced three or more types of trauma were 1.7 to 3 times as likely to have a VFA as youth who experienced only one traumatic event.

Black youth were nearly twice as likely to be arrested for a violent felony as White youth, even when controlling for several criminogenic predictors. Furthermore, the impact of trauma on violent criminality was exacerbated for Blacks compared with Whites. Blacks with three traumas were 1.5 times as likely as Whites with three traumas. As trauma accumulated, the disparity between Blacks and Whites in risk of VFA increasingly widened.

Most of the traumatic events in this study were not significantly correlated with VFA. The impact of trauma may be underestimated due to temporal dynamics, measurement shortcomings, and limitations in the data. Trauma screening was conducted retrospectively, and the time between exposure and symptoms is unknown. The effects of trauma may be absorbed in the baseline control variables. On the contrary, perhaps one year is not enough time for distress to manifest. Furthermore, key domains of trauma toxicity are absent in the data and the trauma typology is limited. Considering the frequency and severity of trauma in individual and cumulative measures could provide more accurate estimations of trauma effects. In this study, Latina/o and White youth were no more or less likely

to be violent felons. This may reflect the ethnic demographics in Florida. The dominant Latina/o populations in Florida may experience circumstances that are more homogeneous with Whites, compared with Blacks. I anticipate Latina/o-White differences may change markedly among other juvenile justice populations.

Racism and other forms of discrimination must also be considered for a more accurate understanding of the link between trauma and VFA. Racial discrimination has yet to be widely conceptualized as a trauma item or risk factor for violent criminality. According to the CTM, the impact of trauma is pronounced for Blacks because systemic racism, and the intersection of gender and class, hinders access to protective resources that buffer the impact of trauma while also exposing them to more risk factors. Sometimes, if not often, society prescribes felony convictions for children's symptoms of trauma-induced distress, and is much more prone to do so when the traumatized child is Black. This disparity represents the junction of multiple institutional inequalities: particularly the failure of schools, health care institutions, and the juvenile justice system to provide equal treatment and basic services to Black children. Child welfare and public sector industries must fully integrate trauma-informed and antiracism approaches. Trauma screening and antiracism training must be institutionalized in schools, health care facilities, and law enforcement entities, to resolve the tragic linkage between childhood trauma, race, and risk for VFA.

Funding

Dr. Micah E. Johnson was supported by the UF Substance Abuse Training Center in Public Health from the National Institute of Drug Abuse (NIDA) of the National Institutes of Health under award number T32DA035167. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Author Biography

Micah E. Johnson is a NIDA postdoctoral fellow in the Department of Epidemiology in the College of Public Health and Health Professions and the College of Medicine at the University of Florida. His research surrounds childhood trauma, substance use disorders, adolescent health, and contemporary race studies.

References

- Alexander M (2010). *The new Jim Crow: Mass incarceration in the age of color-blindness*. New York, NY: New Press.
- Baglivio MT, Epps N, Swartz K, Huq MS, Sheer A, & Hardt NS (2014). The prevalence of adverse childhood experiences (ACE) in the lives of juvenile offenders. *Journal of Juvenile Justice*, 3(2), 1–23.
- Baglivio MT, & Jackowski K (2013). Examining the validity of a juvenile offending risk assessment instrument across gender and race/ethnicity. *Youth Violence and Juvenile Justice*, 11, 26–43. doi:10.1177/1541204012440107
- Baglivio MT, Wolff KT, Piquero AR, & Epps N (2015). The relationship between adverse childhood experiences (ACE) and juvenile offending trajectories in a juvenile offender sample. *Journal of Criminal Justice*, 43, 229–241. doi:10.1016/j.jcrimjus.2015.04.012
- Bernat DH, Oakes JM, Pettingell SL, & Resnick M (2012). Risk and direct protective factors for youth violence results from the national longitudinal study of adolescent health. *American Journal of Preventive Medicine*, 43(2), S41–S50. doi:10.1016/j.amepre.2012.04.023 [PubMed: 22789957]

- Bjorkly S (2013). A systematic review of the relationship between impulsivity and violence in persons with psychosis: Evidence or spin cycle? *Aggression and Violent Behavior*, 18, 753–760. doi:10.1016/j.avb.2013.08.001
- Boles SM, & Miotto K (2003). Substance abuse and violence: A review of the literature. *Aggression and Violent Behavior*, 8, 155–174. doi:10.1016/s1359-1789(01)00057-x
- Bowles S, & Gintis H (2002). Schooling in capitalist America revisited. *Sociology of Education*, 75(1), 1–18.
- Browning CR (2002). The span of collective efficacy: Extending social disorganization theory to partner violence. *Journal of Marriage and Family*, 64, 833–850. doi:10.1111/j.1741-3737.2002.00833.x
- Chapple CL, Tyler KA, & Bersani BE (2005). Child neglect and adolescent violence: Examining the effects of self-control and peer rejection. *Violence and Victims*, 20, 39–53. doi:10.1891/088667005780927638 [PubMed: 16047934]
- Chen P, Voisin DR, & Jacobson KC (2016). Community violence exposure and adolescent delinquency: Examining a spectrum of promotive factors. *Youth & Society*, 48, 33–57. doi:10.1177/0044118x13475827 [PubMed: 33364640]
- Colgate Love M, Roberts J, & Klingele C (2013). *Collateral consequences of criminal convictions: Law, policy and practice* (Vol. 9:10). Eagan, Minn: NACDL Press and Thomson Reuters Westlaw.
- Crooks CV, Scott KL, Wolfe DA, Chiodo D, & Killip S (2007). Understanding the link between childhood maltreatment and violent delinquency: What do schools have to add? *Child Maltreatment*, 12, 269–280. doi:10.1177/1077559507301843 [PubMed: 17631626]
- Cuevas CA, Finkelhor D, Shattuck A, Turner H, & Hamby SL (2013). Children's exposure to violence and the intersection between delinquency and victimization (NCJ 240555). Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Dierkhising CB, Ko SJ, Woods-Jaeger B, Briggs EC, Lee R, & Pynoos RS (2013). Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. *European Journal of Psychotraumatology*, 4, 1–12. doi:10.3402/ejpt.v4i0.20274.
- Dodge KA, Bates JE, & Pettit GS (1990). Mechanisms in the cycle of violence. *Science*, 250, 1678–1683. doi:10.1126/science.2270481 [PubMed: 2270481]
- Elliott DS, Huizinga D, & Menard S (1989). *Multiple problem youth : Delinquency, substance use, and mental health problems*. New York, NY: Springer-Verlag.
- Farrington DP (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims*, 4, 79–100. [PubMed: 2487131]
- Farrington DP (1995). Key issues in the integration of motivational and opportunity-reducing crime prevention strategies. In Wikstrom POH, Clarke RV & McCord J (Eds.), *Integrating crime prevention strategies: Propensity and opportunity* (pp. 333–357). Stockholm, Sweden: National Council for Crime Prevention.
- Felitti VJ, Anda RF, Nordenberg D, & Williamson DF (1998). Adverse childhood experiences and health outcomes in adults: The Ace study. *Journal of Family & Consumer Sciences*, 90(3), 31.
- Finkelhor D, Ormrod RK, & Turner HA (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, 31(1), 7–26. [PubMed: 17224181]
- Flannery DJ, Singer MI, & Wester KL (2003). Violence, coping, and mental health in a community sample of adolescents. *Violence and Victims*, 18, 403–418. doi:10.1891/vivi.2003.18.4.403 [PubMed: 14582862]
- Foster H, & Brooks-Gunn J (2009). Toward a stress process model of children's exposure to physical family and community violence. *Clinical Child and Family Psychology Review*, 12, 71–94. doi:10.1007/s10567-009-0049-0 [PubMed: 19434492]
- Fox BH, Perez N, Cass E, Baglivio MT, & Epps N (2015). Trauma changes everything: Examining the relationship between adverse childhood experiences and serious, violent and chronic juvenile offenders. *Child Abuse & Neglect*, 46, 163–173. doi:10.1016/j.chiabu.2015.01.011 [PubMed: 25703485]

- Franzese RJ, Menard S, Weiss AJ, & Covey HC (2016). Adolescent exposure to violence and adult violent victimization and offending. *Criminal Justice Review*, 42(1), 42–57. doi:10.1177/0734016816679228
- Geller A, Garfinkel I, Cooper CE, & Mincy RB (2009). Parental incarceration and child well-being: Implications for urban families. *Social Science Quarterly*, 90, 1186–1202. doi:10.1111/j.1540-6237.2009.00653.x [PubMed: 20228880]
- Gibson CL (2012). An investigation of neighborhood disadvantage, low self-control, and violent victimization among youth. *Youth Violence and Juvenile Justice*, 10, 41–63. doi:10.1177/1541204011423767
- Gibson CL, Fagan AA, & Antle K (2014). Avoiding violent victimization among youths in urban neighborhoods: The importance of street efficacy. *American Journal of Public Health*, 104, E154–E161. doi:10.2105/ajph.2013.301571 [PubMed: 24328615]
- Gibson CL, & Krohn MD (2013). *Handbook of life-course criminology: Emerging trends and directions for future research*. New York, NY: Springer.
- Gottesman D, & Schwarz SW (2011). *Juvenile justice in the U.S.: Facts for policymakers*. New York, NY: National Center for Children in Poverty, Columbia University.
- Heitzeg NA (2016). *The school-to-prison pipeline: Education, discipline, and racialized double standards*. Santa Barbara, CA: Praeger.
- Henry B, Caspi A, Moffitt TE, & Silva PA (1996). Temperamental and familial predictors of violent and nonviolent criminal convictions: Age 3 to age 18. *Developmental Psychology*, 32, 614–623.
- Herrenkohl TI, Maguin E, Hill KG, Hawkins JD, Abbott RD, & Catalano RF (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health*, 26, 176–186. doi:10.1016/S1054-139X(99)00065-8
- Herrera VM, & McCloskey LA (2001). Gender differences in the risk for delinquency among youth exposed to family violence. *Child Abuse & Neglect*, 25, 1037–1051. doi:10.1016/S0145-2134(01)00255-1 [PubMed: 11601596]
- Hiday VA (1995). The social context of mental illness and violence. *Journal of Health and Social Behavior*, 36, 122–137. [PubMed: 9113138]
- Hirschfield PJ, & Gasper J (2011). The relationship between school engagement and delinquency in late childhood and early adolescence. *Journal of Youth and Adolescence*, 40, 3–22. doi:10.1007/s10964-010-9579-5 [PubMed: 20706779]
- Hoffmann JP, Erickson LD, & Spence KR (2013). Modeling the association between academic achievement and delinquency: An application of interactional theory. *Criminology*, 51, 629–660. doi:10.1111/1745-9125.12014
- Jonson-Reid M (1998). Youth violence and exposure to violence in childhood. *Aggression and Violent Behavior*, 3, 159–179. doi:10.1016/S1359-1789(97)00009-8
- Korbin JE (2003). Children, childhoods, and violence. *Annual Review of Anthropology*, 32, 431–446. doi:10.1146/annurev.anthro.32.061002.093345
- Levenson JS, & Socia KM (2016). Adverse childhood experiences and arrest patterns in a sample of sexual offenders. *Journal of Interpersonal Violence*, 31, 1883–1911. [PubMed: 25711615]
- Massetti GM, Vivolo AM, Brookmeyer K, DeGue S, Holland KM, Holt MK, & Matjasko JL (2011). Preventing youth violence perpetration among girls. *Journal of Women's Health*, 20, 1415–1428. doi:10.1089/jwh.2011.3057
- Massey DS, & Denton NA (1993). *American apartheid: Segregation and the making of the underclass*. Cambridge, MA: Harvard University Press.
- Maxfield MG, & Widom CS (1996). The cycle of violence: Revisited 6 years later. *Archives of Pediatrics & Adolescent Medicine*, 150, 390–395. [PubMed: 8634734]
- McAra L, & McVie S (2016). Understanding youth violence: The mediating effects of gender, poverty and vulnerability. *Journal of Criminal Justice*, 45, 71–77. doi:10.1016/j.jcrimjus.2016.02.011
- Moffitt TE (1993). Adolescent-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674–701. [PubMed: 8255953]
- Morenoff JD, Sampson RJ, & Raudenbush SW (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology*, 39, 517–559. doi:10.1111/j.1745-9125.2001.tb00932.x

- Murray J, & Farrington DP (2005). Parental imprisonment: Effects on boys' antisocial behaviour and delinquency through the life-course. *Journal of Child Psychology and Psychiatry*, 46, 1269–1278. doi:10.1111/j.1469-7610.2005.01433.x [PubMed: 16313427]
- Murray J, & Farrington DP (2008). The effects of parental imprisonment on children. *Crime and Justice*, 37, 133–206.
- Nicholson-Crotty S, Birchmeier Z, & Valentine D (2009). Exploring the impact of school discipline on racial disproportion in the juvenile justice system. *Social Science Quarterly*, 90, 1003–1018. doi:10.1111/j.1540-6237.2009.00674.x
- Perry BL, & Morris EW (2014). Suspending progress: Collateral consequences of exclusionary punishment in public schools. *American Sociological Review*, 79, 1067–1087. doi:10.1177/0003122414556308
- Piquero AR, Farrington DP, & Blumstein A (2003). The criminal career paradigm. *Crime and Justice*, 30, 359–506.
- Resnick MD, Ireland M, & Borowsky I (2004). Youth violence perpetration: What protects? What predicts? Findings from the National Longitudinal Study of Adolescent Health. *Journal of Adolescent Health*, 35, 424.e1–424.e.10. doi:10.1016/j.jadohealth.2004.01.011
- Richmond JM, Elliott AN, Pierce TW, Aspelmeier JE, & Alexander AA (2009). Polyvictimization, childhood victimization, and psychological distress in college women. *Child Maltreatment*, 14, 127–147. doi:10.1177/1077559508326357 [PubMed: 19047476]
- Rios VM (2011). *Policing the lives of Black and Latina/o boys*. New York: New York University Press.
- Rojas-Gaona CE, Hong JS, & Peguero AA (2016). The significance of race/ethnicity in adolescent violence: A decade of review, 2005–2015. *Journal of Criminal Justice*, 46, 137–147. doi:10.1016/j.jcrimjus.2016.05.001
- Sampson RJ, & Laub JH (2005). A life-course view of the development of crime. *The ANNALS of the American Academy of Political and Social Science*, 602, 12–45. doi:10.1177/0002716205280075
- Sampson RJ, Morenoff JD, & Earls F (1999). Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review*, 64, 633–660. doi:10.2307/2657367
- Sampson RJ, Morenoff JD, & Raudenbush S (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, 95, 224–232. doi:10.2105/ajph.2004.037705 [PubMed: 15671454]
- Sawyer SM, Afifi RA, Bearinger LH, Blakemore S-J, Dick B, Ezech AC, & Patton GC (2012). Adolescence: A foundation for future health. *The Lancet*, 379, 1630–1640. doi:10.1016/s0140-6736(12)60072-5
- Schafer MH, Ferraro KF, & Mustillo SA (2011). Children of misfortune: Early adversity and cumulative inequality in perceived life trajectories. *American Journal of Sociology*, 116, 1053–1091.
- Slate RN, & Johnson WW (2008). *The criminalization of mental illness: Crisis & opportunity for the justice system*. Durham, NC: Carolina Academic Press.
- Smith C, & Thornberry TP (1995). The relationship between childhood maltreatment and adolescent involvement in delinquency. *Criminology*, 33, 451–481. doi:10.1111/j.1745-9125.1995.tb01186.x
- Smith PD, Pope SK, Caldarera J, & Lashus BA (1993). Adolescents' self-report of conflict and cohesion in the family: Correlates of family alcohol and drug problems. *Journal of Adolescent Health*, 14, 41–41. doi:10.1016/1054-139x(93)90033-1
- Stewart EA, & Simons RL (2006). Structure and culture in African American adolescent violence: A partial test of the “code of the street” thesis. *Justice Quarterly*, 23, 1–33. doi:10.1080/07418820600552378
- Sutton JR (2013). Structural bias in the sentencing of felony defendants. *Social Science Research*, 42, 1207–1221. doi:10.1016/j.ssresearch.2013.04.003 [PubMed: 23859726]
- Thompson R, Jones DJ, Litrownik AJ, English DJ, Kotch JB, Lewis T, & Dubowitz H (2014). Linking mother and youth parenting attitudes: Indirect effects via maltreatment, parent involvement, and youth functioning. *Child Maltreatment*, 19, 233–246. doi:10.1177/1077559514547263 [PubMed: 25113632]

- Tolan PH, & Thomas P (1995). The implications of age of onset for delinquency risk. II: Longitudinal data. *Journal of Abnormal Child Psychology*, 23, 157–181. doi:10.1007/BF01447087 [PubMed: 7642832]
- Turner RJ, & Lloyd DA (1995). Lifetime traumas and mental health: The significance of cumulative adversity. *Journal of Health and Social Behavior*, 36, 360–376. doi:10.2307/2137325 [PubMed: 8719054]
- Wang MT, & Fredricks JA (2014). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child Development*, 85, 722–737. doi:10.1111/cdev.12138 [PubMed: 23895361]
- Weeks R, & Widom CS (1998). Self-reports of early childhood victimization among incarcerated adult male felons. *Journal of Interpersonal Violence*, 13, 346–361. doi:10.1177/088626098013003003
- Weiner MD, Sussman S, Sun P, & Dent C (2005). Explaining the link between violence perpetration, victimization and drug use. *Addictive Behaviors*, 30, 1261–1266. doi:10.1016/j.addbeh.2004.12.007 [PubMed: 15925136]
- Wheaton B, & Clarke P (2003). Space meets time: Integrating temporal and contextual influences on mental health in early adulthood. *American Sociological Review*, 68, 680–706.
- Wheelock D (2005). Collateral consequences and racial inequality: Felon status restrictions as a system of disadvantage. *Journal of Contemporary Criminal Justice*, 21, 82–90. doi:10.1177/1043986204271702
- White HR, & Widom CS (2003). Intimate partner violence among abused and neglected children in young adulthood: The mediating effects of early aggression, antisocial personality, hostility and alcohol problems. *Aggressive Behavior*, 29, 332–345. doi:10.1002/ab.10074
- Wilson WJ (2012). *The truly disadvantaged: The inner city, the underclass and public policy* (2nd ed.). Chicago, IL: University of Chicago Press.

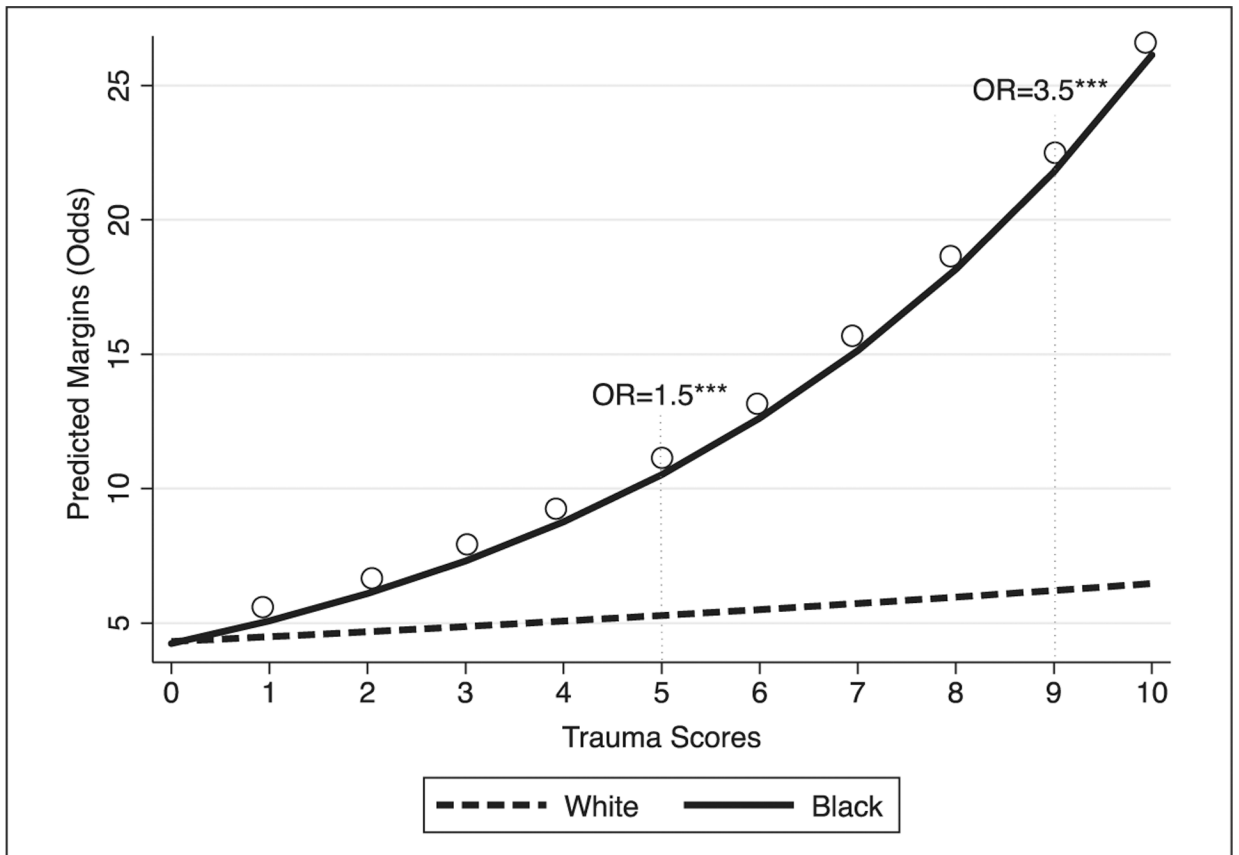


Figure 1. The interaction effects of trauma and race on violent felony arrest. *Note.* OR = odds ratio.

Table 1.Descriptive Statistics for All Categorical Variables in the Study ($N = 3,284$).

Variable	Item	Total	No APF	APF	Chi-square
		Percentage			
Race	White	31	64	36	(3) 110.53 ***
	Black	58	44	56	
	Hispanic	10	56	44	
	Other	1	67	33	
Gender	Female	18	59	41	(1) 13.98 ***
Income (US\$)	< 15,000	33	61	39	(3) 2.67
	15,000–34,999	54	55	45	
	35,000–49,999	10	51	49	
	>50,0000	3	46	54	
Parent supervision	Consistent	53	51	49	(2) 0.19 **
	Sporadic	35	51	49	
	Inadequate	13	52	48	
Substance abuse	Yes (ref. = no)	39	56	44	(1) 2100
Verbal aggression	Never	43	53	47	(2) 12.21 **
	Rarely	49	52	48	
	Sometimes	8	51	49	
	Often	0	53	47	
Physical Aggression	Never	33	4	96	(3) 44.38 ***
	Rarely	29	55	45	
	Sometimes	32	50	50	
	Often	6	46	54	
Self-control	Yes	31	55	45	(2) 27.90 ***
	Somewhat	62	52	48	
	None	7	35	65	
Impulsivity	No issues	7	52	48	(3) 0.09
	No techniques	56	52	48	
	Knows techniques	32	52	48	
	Uses techniques	5	51	49	
APF 2007	One or more	45	7	93	(1) 2200 ***

Note. Results from chi-square tests displayed as row percentages (degrees of freedom in parentheses). APF = Against-person felony.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 2.Descriptive Statistics for All Continuous Variables in the Study ($N = 3,284$).

Variable	Range		Total		No APF		APF		T test
			M	SD	M	SD	M	SD	
Trauma score 2007	0	11	3.44	2.01	3.94	2.08	4.04	1.92	$t = -1.80^{***}$
Age	12	16	13.8	0.95	13.8	0.96	13.9	0.93	$t = -4.6348^{***}$
Suspensions	0	5	2.49	1.77	2.37	1.77	2.63	1.77	$t = -4.09$

APF = Against-person felony.

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