Female Juvenile Offenders: Differentiating Mechanisms of Antisocial Behavior by Neighborhood Disadvantage and Race

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Abstract

The current study examined the impact of violence exposure and neighborhood disadvantage on antisocial behavior among Black (n = 69) and White (n = 53) female juvenile offenders. Using a multi-method research design, the study assessed neighborhood disadvantage through census level data, violence exposure through self report, and antisocial behavior through self report and official records. Self report of antisocial behavior was assessed at time of incarceration (Wave I) and post-release (Wave II). Results indicated that Black girls were significantly more likely than White girls to live in disadvantaged neighborhoods, but both reported similar levels of violence exposure. In terms of outcomes, no racial differences were observed with regard to self report of antisocial behavior but Black girls were significantly more likely to get rearrested for non-violent crimes. A divergent pattern of associations emerged; witnessing violence and peer abuse were indicative of Wave I antisocial behavior whereas age and time at risk were predictive of Wave II antisocial behavior. Neighborhood disadvantage was only associated with rearrest for non-violent crimes. Race specific pathways were explored using multiple group analyses. Parental physical abuse was associated with Wave II violent behaviors and recidivism for White girls whereas witnessing violence was associated with Wave II delinquent behaviors for Black girls. Results suggest that contextual characteristics play a role in offending among female juvenile offenders generally and Black female juvenile offenders, specifically. Race specific risk models warrant further investigation, and may help lawmakers and clinicians in addressing racial disparities in the justice system.

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Female Juvenile Offenders: Differentiating Mechanisms of Antisocial Behavior by Neighborhood Disadvantage and Race

While several studies have documented racial disparities within the juvenile justice system (Huizinga, Thornberry, Knight, & Lovergove, 2007; Redding & Arrigo, 2005), few have examined whether race specific mechanisms exist by which Black and White female juvenile offenders engage in antisocial behavior. As the gender gap in arrest rates and official crime reports continues to decrease (Poe-Yamagata & Butts, 1996; Sickmund, 2004; Snyder, 2005; Snyder & Sickmund, 2006) and the over-representation of minorities persists (Puzzanchera, Stahl, Finnegan, Tierney & Snyder, 2003; Redding & Arrigo, 2005; Sickmund, 2004; Snyder, 2005), understanding the differential impact of risk factors on female offenders is essential to developing culturally sensitive theories and programming.

Although males still comprise the majority of juvenile arrests, the representation of females in the juvenile justice system is rising (Snyder & Sickmund, 2006). From 1980 to 2003, the proportion of girls under the age of 18 who were arrested increased for both the Violent Crime Index (i.e., aggravated assault, rape, robbery and murder; 10% to 18%) and the Property Crime Index (i.e. larceny, motor vehicle theft, arson, and burglary; 19% to 32%). Notably, the increase in the Violent Crime Index was driven by aggravated assault (15% to 24%). Hence, while the increase in female juvenile offending was greater for property crimes, there has also been an increase in aggravated assaults. As a result, there is a pressing need to examine whether research regarding the etiology, correlates, and concomitant risk factors for antisocial behavior derived from male and adult samples translates to female juvenile offenders.

Toward this aim, the current study sought to extend previous research to girls in the juvenile justice system by empirically substantiating two well-established risk factors for antisocial behavior - neighborhood disadvantage and violence exposure. It further investigated whether these risk factors function differently for Black and White female juvenile offenders. These findings have the potential to explicate the pathways that lead to the discrepant representation of minorities in the judicial system. Disentangling race-based mechanisms may also provide an opportunity to tailor interventions and re-entry programs to divergent population needs, rather than utilizing uniform interventions that may not be culturally sensitive or effective for youth from minority communities.

Racial Discrepancy in Antisocial Behavior

There is a disproportionate representation of minorities in every stage of the juvenile justice system (Huizinga et al., 2007; Puzzanchera et al., 2003; Redding & Arrigo, 2005; Snyder, 2005). Data from official statistics and self-reports indicate that Black Americans offend at disproportionately higher rates than White Americans (Nofziger & Kurtz, 2005; Piquero & Buka, 2002; Puzzanchera et al., 2003; Redding & Arrigo, 2005; Snyder, 2005). In 2003, Black youth comprised 45% of all juvenile arrests for violent crimes, a striking statistic given that this cohort represented only 16% of the juvenile population (Snyder, 2005). This trend is true regardless of gender. In a large scale prospective study of normative youth, non-White girls, compared to White girls, were more likely to engage in antisocial activities and accounted for the largest proportion of offenses within gender (Piquero & Buka, 2002). Similarly, another study found that Black girls were twice as likely to engage in antisocial behavior as compared to White girls (Blitstein, Murray, Lytle, Birnbaum & Perry, 2005).

While racial differences may be partially attributable to a response bias in the justice system, there is support that true behavioral (see review by South & Messner, 2000) and environmental (see reviews by Leventhal & Brooks-Gunn, 2000; Peterson &

Krivo, 2005; Sampson, Morenoff, & Gannon-Rowley, 2002) differences exist that contribute to the over-representation of minorities within the justice system. Indeed, Huizinga and colleagues (2007) found that disproportionate minority contact with the justice system is substantially reduced (but not negated) when accounting for the combined impact of additional risk factors such as neighborhoods, educational problems, and family structure.

In an effort to explain the "race-crime" link, research has focused on risk factors at either a macro (e.g., indices of social structure such as neighborhood disadvantage; Peterson & Krivo, 2005; Sampson, Morenoff, & Raudenbush, 2005) or micro-level (e.g., individual level risk such as exposure to violence; Holsinger & Holsinger, 2005; Wierson & Forehand, 1995). Neighborhood disadvantage and violence exposure have both been linked to antisocial behavior (Dobrin, Lee, & Price, 2005; Odgers, Reppucci, & Moretti, 2005; Paschall, Flewelling,& Ennet, 1998; Peterson & Krivo, 2005; Peterson, Krivo, & Harris, 2000; Sampson et al., 2005; Shihadeh & Shrum, 2004). However, no study has integrated both macro and micro-level risk factors to help explain the discrepant prevalence in antisocial behavior among Black and White female juvenile offenders. Examining these race-based differences goes beyond treating female juvenile offenders as a homogenous group and examines the differences that exist *within* the group. Such analyses may provide a broader, more sensitive picture of the etiology and correlates of criminal behavior among all girls.

Neighborhood Disadvantage.

Thus far, much research has been conducted on the relationship between macro-level structural processes and antisocial behavior and it has been mainly done from a sociological perspective (see reviews by Peterson & Krivo, 2005; Sampson et al., 2002; Sampson & Wilson, 1995). According to Shaw and McKay's (1969) social disorganization theory, three structural factors account for the discrepant rates in crime

and delinquency: 1) socioeconomic status, 2) residential stability, and 3) ethnic heterogeneity (Sampson, 1997). These factors function through formal and informal social networks and institutions to impact criminal offending in neighborhoods (Sampson, 1997). Therefore, it is not low socioeconomic status or unemployment *per se,* but the community level structures and processes, which enable antisocial behavior within disadvantaged neighborhoods.

Further, Fagan and colleagues (Fagan & Meares, 2003; Fagan, West, & Holland, 2003; 2004) argue that incarceration can actually perpetuate crime in these neighborhoods. Using a geospatial data analytic approach, they examined the growth and spatial concentration of incarceration in police precincts and low income, minority neighborhoods in New York City over a period of eleven years (1985 to 1996). At first, they found that incarceration rates rose with crimes rates. However, incarceration rates remained fairly high, even as crime rates fell in the 1990s, and predicted higher crimes rates one year later. They argued that laws related to drug enforcement and mandated sentencing for repeat offenders increased and sustained incarceration in low income neighborhoods. The researchers proposed several mechanisms by which the spatial concentration of incarceration sustains the cycle of crime via community level factors (e.g., police enforcement and parole surveillance) and individual level factors (e.g., disruptions in family ties, lower household income and greater single headed households).

Race and neighborhood disadvantage. The theories discussed above suggest that the difference in crime rates between Black and White Americans could be caused and perpetuated by varying levels of disadvantage between these two groups (Fagan & Meares, 2003; Sampson et al., 2002; Sampson et al., 2005; Sampson & Wilson, 1995). Indeed, Black Americans are more likely to inhabit structurally disadvantaged neighborhoods that have higher rates of crimes (Peeples & Loeber, 1994; Peterson &

Krivo, 2005; Sampson, 1997; Sampson et al., 2002). The racial gap in offending is further intensified by three factors: 1) disadvantaged White communities tend to have less structural disadvantage than typical Black communities (Peeples & Loeber, 1994; Peterson & Krivo, 2005; Sampson, 1997), 2) Black Americans are less able to leave high crime neighborhoods compared to their White counterparts (South & Messner, 2000), and 3) low income White families rarely live in the same level of disadvantage as Black families (Duncan, Brooks-Gunn, & Klebanov, 1994; Peeples & Loeber, 1994). Indeed, neighborhood factors have been found to explain about 60 to 70 percent of the racial disparity in antisocial behavior (Sampson et al., 2005).

Notably, when the same levels of disadvantage occur for both Black and White Americans, the impact on antisocial behavior tends to be similar for both groups, (Krivo & Peterson, 1996; Peterson, & Krivo, 2005). For instance, Krivo and Peterson (1996) compared predominantly Black and predominantly White neighborhoods at varying levels of structural disadvantage and found that extremely disadvantaged neighborhoods have unusually high rates of crimes for both racial groups.

The results regarding the relationship between neighborhood disadvantage, race, and antisocial behavior from this macro-level, official statistics approach (i.e., neighborhood crimes rates; Krivo & Peterson, 1996; Smicha-Fagan & Schwartz, 1986; South & Messner, 2000;) has been replicated at a micro-level, individual-based approach (Beyers, Loeber, Wikström, & Stouthamer-Loeber, 2001; Monahan et al., 2001; Peeples & Loeber, 1994; Silver, Mulvey, & Monahan, 1999). For example, Peeples and Loeber (1994) found that Black youth who did *not* live in underclass neighborhoods resembled White youth in seriousness and frequency of antisocial behaviors. Even after accounting for individual level variables, residing in underclass neighborhoods was significantly related to antisocial behavior while race was not, suggesting that racial differences in offending are related to context variables rather than

race, per se. Similarly, Beyers et al., (2001) found that different risk factors emerged when examining high and low socioeconomic neighborhoods. They concluded that context-dependent factors (e.g. early sexual intercourse, carrying a hidden weapon) were more predictive of repeated violence for boys living in low socioeconomic neighborhoods, whereas, individual level risk factors (e.g. early physical aggression), were more predictive of repeated violence in high socioecomic neighborhoods.

The above results have been replicated with psychiatric patients using data from the MacArthur Violence Risk Assessment Study. Monahan et al., (2001) found an association between race and violence among discharged psychiatric patients. However, when comparing Black and White patients residing in comparable neighborhoods, no differences in violence risk were observed. Using the same data, Silver et al., (1999) demonstrated that neighborhood factors are predictive of future violence above and beyond individual level factors, such as socioeconomic status, history of arrests, substance abuse, and psychopathy.

Finally, a line of studies have found that *relative* disadvantage rather than *absolute* disadvantage predicts antisocial behavior (Daly, Wilson, & Vasdev, 2001; Harer & Steffensmeier, 1992; Hipp, 2007; Hsieh & Pugh, 1993; Wilson & Daly, 1997). Theoretically, income inequality can create frustration and promote interpersonal competition for limited material and social resources which in turn drives antisocial behavior (Blau & Blau, 1982; Blau & Golden, 1986; Daly et al., 2001). Hence, the higher rates of antisocial behavior among Black Americans may be due to social comparison in income inequality.

Indeed, studies have found a robust association between relative deprivation and offending (Blau & Blau, 1982; Blau & Golden 1986; Hsieh & Pugh, 1993) but inequality may not necessarily explain the racial discrepancy in offending (Harer & Steffensmeier, 1992). For example, Blau and Golden (1986) found that racial inequality in

socioeconomic status was related to certain offenses such as assault and murder. However, when Harer and Steffensmeier (1992) disaggregated the data by race, results from census data and crime statistics suggest that income inequality impacts White Americans more than Black Americans. High arrest rates for violent crimes are more prevalent among Whites who live in areas with high levels of White income inequality. Interestingly, the relationship between cross race income inequality (Black to White) and violence was weak and non-significant. The authors conclude that 1) White Americans do not use Black Americans as a reference group and 2) inequality among White Americans may spur violence by White Americans but does not necessarily explain violence by Black Americans.

Overall, these findings suggest that to understand the higher representation of Black Americans in the justice system it is essential to consider the context within which they live. The impact of neighborhood variables on antisocial behavior has been demonstrated: 1) at a macro-level using census and official crime reports and 2) at a micro-level with high risk populations, specifically males, boys, and psychiatric inpatients.

Gender Differences. Studies have found that neighborhood disadvantage leads to higher levels of antisocial and aggressive behavior across gender (Hipwell, et al, 2002; Kroneman, Loeber, & Hipwell, 2004; Steffensmeier & Haynie, 2000). Girls who live in disadvantaged neighborhoods are exposed to greater risks such as violence exposure and deviant friends compared to girls in advantaged neighborhoods (Ingoldsby & Shaw, 2002; Kroneman et al., 2004). Further, neighborhood effects tend to be modest in magnitude (5% of the variance) for both girls and boys after accounting for individual and family level factors such as age and family structure (see reviews Kroneman et al., 2004; Leventhal & Brooks-Gunn, 2000), though some studies suggest that the effect size may be smaller for females than for males (Steffensmeier & Haynie, 2000).

However, researchers have argued that the intervening processes differ for males and females given that females present with a different risk profile. Specifically, females engage in delinquent activities at a later age, are more likely to engage in aggression within their families and close relationships, and are less likely to be involved in gangs (Kroneman et al., 2004). Hence the pathway between neighborhood disadvantage and female antisocial behavior is not well understood and may vary because girls may react differently to factors within their neighborhood as compared to boys.

Neighborhood Processes. Research has shown that people in disadvantaged neighborhoods are more likely to experience an array of other risk factors. These factors include, but are not limited to: 1) witnessing violence (Attar, Guerra, & Tolan, 1994; Buka, Stichick, Birdthistle, & Earls, 2001; Gorman-Smith & Tolan, 1998), 2) experiencing violence (Alba, Logan, & Bellair, 1994; Coulton, Crampton, Irwin, Spilsbury & Korbin, 2007; Coulton, Korbin, Su & Show, 1995; Esbensen & Huizinga, 1991), 3) deviant peer group affiliation (Brody et al., 2001; Haynie, Silver & Teasdale, 2006; Simons, Johnson, Beaman, Conger, & Whitbeck, 1996), 4) academic/cognitive difficulties (Bellair & McNulty, 2005; Duncan et al., 1994), and 5) familial risk factors such as parental criminality and substance use (Crum, Littlie-Blanton, & Anthony, 1996; McLeod & Nonnemaker, 2000). Notably, causal inferences cannot be made about these risk factors due to selection issues (e.g., high risk families may select to live in high risk neighborhoods). Nonetheless, these risk factors are embedded within disadvantaged neighborhoods and can impact antisocial behavior.

Utilizing Bronfrenbrenner's (1979) human systems viewpoint, researchers have started to examine the influence of neighborhood variables as mediated and moderated through more micro-level variables including familial, peer, and individual level factors. Within neighborhoods, what processes or mechanisms operate to either increase or

decrease antisocial behavior at an individual level? Results are mixed and both direct and indirect effects of neighborhood variables have been found (see review Ingoldsby & Shaw, 2002).

Among normative adolescents, using the Add Health data, Haynie et al., (2006) found that youth living in disadvantaged neighborhoods were more likely to engage in violence than youth living in less disadvantaged neighborhoods. However, youth in disadvantaged neighborhoods were also more likely to be exposed to violent peers and the impact of neighborhood disadvantage on violence was partially mediated by these deviant peer relationships. Conversely, a study examining serious male juvenile offenders (Chung & Steinberg, 2006) did not find a direct relationship between neighborhood level structural variables and individual offending, but perceptions of their neighborhood were found to be indirectly related to offending via parenting behavior and peer affiliation. Similarly, at a macro-level, Cantiollion (2006) described how neighborhood stability indirectly influenced antisocial behavior at a neighborhood and individual level by increasing parental monitoring and preventing deviant peer affiliation among adolescent males.

Overall, the groundwork for understanding the mechanisms of neighborhood disadvantage as it relates to antisocial behavior is being established for normative populations and high risk males (Attar et al., 1994; Chung & Steinberg, 2006; Haynie et al., 2006). However, little attention has been paid to the direct and indirect pathways between neighborhood disadvantage and individual level variables among high risk girls such as female juvenile offenders.

Violence Exposure

The current study sought to examine the impact of two micro-level risk factors for antisocial behavior – experiencing violence and witnessing violence. These risk factors were chosen because: 1) they are highly prevalent among incarcerated girls (Dixon,

Howie, & Starling, 2004; Lipschitz, Ramusson, Anyan, Cromwell, & Southwick, 2000; Odgers & Moretti, 2002; Odgers & Repucci, 2002) and 2) have been linked to antisocial behavior among this group (Flannery, Wester, & Singer, 2004; Guerra, Huessman, & Spindler, 2003; Mersky & Reynolds, 2007; Molnar, Browne, Cerda, & Buka, 2005; Nofziger & Kurtz, 2005; Smith & Thornberry, 1995; Song, Singer, & Anglin, 1998; Weaver, Borkowski & Whitman, 2008; Widom, 1989; Zingraff, Leiter, Myers, & Johnsen, 1993).

Indeed, victimization experiences among girls in the juvenile justice system are pronounced (Acoca, 1999; Fergusson & Woodward, 2000; Lederman & Brown, 2000). In their review of the literature on female juvenile offenders, Odgers & Reppucci (2002) found estimates of experiencing violence to be as high as 90% in some samples. High rates of witnessing violence are also well-documented with high risk girls. Lipschitz et al. (2000) found that 85% of girls living in urban settings had witnessed community violence (defined as seeing someone shot, stabbed, or killed); with the majority (68%) being exposed to more than one event.

As can be gleaned from the above statistics, experiencing violence and witnessing violence often co-occur and rarely occur in isolation (Brady & Caraway, 2002; Fehon, Grilio, & Lipschitz, 2001; Muller, Goebel-Fabbri, Diamond, & Dinklage, 2000; Saunders, 2003). Results from the National Survey of Adolescents (Kilpatrick & Saunders, 1999; Saunders, 2003) indicated that about 20% of their normative sample experienced two of four types of victimization (i.e., sexual assault, physical assault, physical abuse, or witnessing violence). Within clinical populations, rates of co-occurrence are even higher; Brady and Caraway (2002) found that over 80% of youth in residential treatment programs had experienced two or more traumas, with an average of three traumatic experiences (e.g., sexual abuse, physical abuse, severe neglect, witnessing domestic violence, and sibling abuse). In his review of the literature,

Saunders (2003) concluded that most victims are victims of multiple types of trauma and/or multiple episodes of the same type of trauma. It seems that types of violence exposure are neither mutually exclusive nor singular. Hence, the current study utilized both witnessing violence and experiencing violence in an attempt to capture two prevalent forms of violence exposure among high risk girls.

***Race and Violence Exposure*.** Results have been mixed regarding racial differences in the prevalence of violence exposure. Large scale, normative studies suggest that Black Americans are at greater risk for violence exposure in the form of sexual assault, physical abuse, emotional abuse, and witnessing violence (Buka et al., 2001; Finkelhor, Ormrod, Turner, & Hamby, 2005; Kilpatrick & Saunders, 1999; National Institute of Justice, 2003; Piquero & Buka; 2002). Specifically, in a report by the National Institute of Justice (2003), more than half of the Black youth in their normative sample witnessed violence (compared to 34% White youth) and about a quarter were physically assaulted (compared to 16%). Similarly, Selner-O'Hagen and colleagues (Selner-O'Hagen, Kindlon, Buka, Raudenbusch, & Earls, 1998) found that Black youth were more than three times likely to see someone getting shot in their lifetime and ten times more likely to have seen this act in the past year. On the other hand, in a study specific to girls in the juvenile justice system, White female juvenile offenders were more likely to be abused (physically and sexually) than their Black counterparts (Holsinger & Holsinger, 2005). This difference in "normative" and "correctional" samples, if replicated, may indicate the presence of a higher risk profile for White girls to engage in antisocial activity that subsequently leads to involvement with the justice system.

Taken together, the prevalence of violence exposure has been documented among girls in normative and incarcerated samples (Finkelhor et al., 2005; Odgers & Moretti, 2002; Silverthorn & Frick, 1999), but whether racial differences exist with regard to prevalence may depend on the reference group.

Experiencing Violence. The literature has been consistent in finding that children and adolescents who experience violence are more likely to engage in antisocial behavior later in life (Mersky & Reynolds, 2007; Molnar et al., 2005; Smith & Thornberry, 1995; Widom, 1989; Zingraff et al., 1993). English, Spatz-Widom, and Brandford (2001) found that rates of antisocial behavior were significantly higher among abused or neglected children (as compared to an age and race matched control). Indeed, individuals with a history of maltreatment were about five times more likely to have an arrest as a juvenile and two times more likely to have an arrest as an adult. There were no differences in the strength of this relationship by gender (English et al., 2001).

However, other studies have found that the relationship between experiencing violence and later antisocial behavior varies by gender, with outcomes being more severe for girls (Blum, Ireland, & Blum, 2003; English et al., 2001; Herrera & McCloskey, 2001). Indeed, several studies have found that girls with prior physical abuse histories were more likely than boys with similar histories to be arrested for violent offenses (Blum et al., 2003; English et al., 2001; Herrera & McCloskey, 2001), and to have adult arrests (Widom, 1989). Similarly, a study focusing on gender specific risk factors among juveniles on probation, found child abuse to be a stronger predictor of re-offense for girls (r = .41) than for boys (r = .03; Funk, 1999). Finally, earlier studies utilizing the present sample of violent female juvenile offenders found that victimization experiences including physical abuse were related to higher levels of overt aggression, relational aggression, and rearrest (Burnette & Reppucci, in press; Odgers et al., 2005).

Research suggests there may be a differential impact of victimization by race, with the more detrimental outcomes for Black youth. Holsinger and Holsinger (2005) found that incarcerated girls were more likely to commit a violent crime if they had been abused. When disaggregating these data by race, the results held true for Black girls,

but not for White girls. Other studies have also found that maltreated Black youth were more likely to have an arrest for violent behaviors than non-maltreated Black youth (English et al., 2001; Rivera & Widom, 1990; Widom, 1989) and maltreated White youth (Zingraff et al., 1993).

Witnessing Violence. Similar to experiencing violence, previous studies have demonstrated a clear link between witnessing violence and future antisocial behavior within community populations (Flannery et al., 2004; Guerra et al., 2003; Molnar et al., 2005; Nofziger & Kurtz, 2005; Song et al., 1998; Weaver et al., 2008) and incarcerated boys (Halliday-Boykins & Graham, 2001). Studies, specific to adolescents, suggest a moderate relationship (10 to 22% of the variance) between witnessing violence and antisocial behavior (Flannery et al., 2004; Halliday-Boykins & Graham, 2001; Muller et al., 2000; Song et al., 1998).[1]

Research has examined experiencing violence and witnessing violence concurrently to determine which has a stronger association to antisocial behavior. Some have found that witnessing violence can be a stronger correlate of antisocial behavior than experiencing violence (Eitle & Turner, 2002; Flannery et al., 2004; Herrera & McCloskey, 2001), while others have found that both are equally detrimental (McGee, 2003; Muller et al., 2000; Nofziger & Kurtz, 2005; Weaver et al., 2008). For example, Flannery et al. (2004) found that witnessing violence accounted for 16% of the variance in violent behavior, whereas being victimized explained only 2% of the variance. Nofziger and Kurtz (2005) found experiencing violence was predictive of antisocial behavior but the relationship within which it occurred determined the strength – physical abuse by parents increased the odds of future violence by 70%, physical assault by others by 226%, and witnessing violence by 80%. Finally, Weaver and colleagues

[1] These estimates were derived by squaring the bivariate correlations from the individual studies without accounting for other individual and familial risk factors.

(2008) found that the impact of the risk factors varied by outcome among adolescents - witnessing violence was more predictive of delinquent behaviors whereas experiencing violence was more predictive of violent behaviors. Overall, the relationship between witnessing violence, experiencing violence, and antisocial behavior is complicated and has been found to vary by outcome and context.

In terms of racial differences on the impact of witnessing violence, research indicates that the associations do not vary by race, but it may be a stronger predictor for Black Americans since they are more likely to witness violence than White Americans (Eitle & Turner, 2002; Flannery et al., 2004; Paschall et al., 1998; Rosario, Salzinger, Feldman, & Ng-Mak, 2003; Schwab-Stone et al., 1999). Paschall et al. (1998) found that witnessing violence was a significant risk factor for antisocial behavior regardless of race or socioeconomic status. Similarly, Schwab-Stone and colleagues (1999), using multiple group analyses, found that race did not moderate the association between violence exposure and antisocial behavior.

In sum, several studies have demonstrated that witnessing and experiencing violence increases the likelihood of future acts of antisocial behavior by the victim (English et al., 2001; Herrera & McCloskey, 2001; Wordes & Nunez, 2002). Further, with regard to racial differences, Black Americans are more likely to: 1) experience and witness violence in normative samples (Buka et al., 2001; Finkelhor et al., 2005; Kilpatrick & Saunders, 1999; Selner-O'Hagen et al., 1998); and 2) experience more detrimental outcomes of violence exposure, when racial differences exist (English et al., 2001; Rivera & Widom, 1990; Widom, 1989; Zingraff et al., 1993). Hence, witnessing and experiencing violence may help to explain some of the variance in the disproportionate representation of Black Americans in the justice system at a more micro-level.

Neighborhood Disadvantage and Violence Exposure

Are the higher rates of violence exposure explained by neighborhood disadvantage? A small body of research is beginning to examine whether neighborhood disadvantage can explain the racial disparity in both the prevalence and impact of violence exposure. For instance, Alba et al., (1994) found that neighborhood factors, rather than race, are more important in terms of experiencing violence. Examining individual and contextual factors, they found that Black Americans were most likely to be victimized, even in comparison to other minorities such as Hispanics. However, once neighborhood factors were taken into account, these racial differences dissipated. It is context, rather than race, that is predictive of victimization.

Further, there appears to be some evidence that highly disadvantaged neighborhoods moderate individual and family risk factors (Attar et al., 1994; Roche, Ensminger, & Cherlin, 2007; Schuck & Widom, 2005; Turner, Hartman, & Bishop, 2007) and as a result disproportionately impact Black Americans. For example, Attar and colleagues (1994) found an interaction between neighborhood disadvantage and witnessing violence. Specifically, young children who lived in highly disadvantaged neighborhoods *and* witnessed violence were more likely to display aggression one year later; this relationship was not present for children in less disadvantaged neighborhoods. Similarly, Schuck and Widom (2005) found that higher levels of neighborhood disadvantage exacerbated the impact of maltreatment on later antisocial behavior regardless of gender or race. In contrast, a study of 9 to 15 year old girls in Chicago neighborhoods found that neighborhood disadvantage and victimization were both significantly but independently associated with future antisocial behavior (Molnar et al., 2005). Interestingly, victimization was a stronger predictor of violence in girls who lived in *less* disadvantaged neighborhoods.

Self Report versus Official Records of Offending

The discussion of the above literature has included two distinct forms of antisocial behavior – self report and official records of offending. Indeed, research on criminal involvement has traditionally used these two different indicators to determine whether a person has engaged in a specific antisocial act. A significant body of research examining the merits of each of these measurement methods exists. In essence, it concludes that research would ideally utilize both of these indicators as they each provide unique information. However, the decision as to which outcome is actually used to measure antisocial behavior is often informed by: 1) the specific research question (i.e., whether the outcome of interest is getting "caught" versus actually engaging in an antisocial act; Hindelang, Hirschi, & Weis, 1979), 2) logistic constraints (i.e., access to either or both forms of information), and 3) methodological constraints (i.e., Are self reports accurate? How often do police catch the person committing the antisocial behavior?).

The last issue has been empirically assessed. That is, do these two seemingly similar outcomes measure the same construct? Some studies demonstrate agreement between the two (Haapasalo & Moilanen, 2004; Kazemian, LeBlanc, Farrington, & Pease, 2007; Maxfield, Weiler, & Widom, 2000); others find finer distinctions as to the offense type (Babinski, Hartsough, & Lambert, 2001; Kazemian & Farrington, 2005); while still others find markedly different outcomes (Farrington et al., 2003; Lynam, Piquero, & Moffitt, 2004). For example, Kazemian and colleagues (2007) found that when examining the length of adjudicated males' criminal careers, the results from self report of offending and official records were highly similar. On the other hand, Lynam et al. (2004) in examining violence specialization, found support for specialization when using self report of offending but not when examining official records. Babinski et al. (2001) found acceptable statistical agreement varied by type of crime, their results found

that agreement on acts such as theft, weapon access, burglary, and robbery were acceptable, but acts such as vandalism, assault with a weapon, assault without a weapon, and hitting a spouse or partner were under-reported. Hence, both less serious and more serious forms of crime were not being reported, regardless of race or socioeconomic status. Despite the divergence in agreement over the specific acts, there is some evidence that risk factors such as neighborhood disadvantage and family processes operate similarly for both outcomes – self report of offending and official records (Kirk, 2006). The current study examined both outcomes with the idea that the implications for the two can be different. However, the hypotheses proposed will not be differentiated by outcome.

Delineating Race Specific Pathways

Most research examining racial differences has treated race as an individual level variable that is entered into a statistical model to determine whether a main effect exists. While looking for main effects may be informative, it can be misleading because combined data can mask substantial differences that occur within groups (South & Messner, 2000; Wierson & Forehand, 1995). To decipher race specific pathways to antisocial behavior, it is important to examine the groups separately (Foshee, Ennett, Bauman, Benefield, & Suchindran, 2005; Holsinger & Holsinger, 2005; Miller-Johnson, Moore, Underwood, & Coie, 2005; Wierson & Forehand, 1995), as different risk variables may emerge.

Studies that have separated the data by race have found support for race specific pathways to offending. Wierson and Forehand (1995) found no main effect for race in their model but when they examined the groups separately, different risk models for antisocial behavior were indicated for Black and White Americans. Other studies of race specific risk models (Holsinger & Holsinger, 2005; Katz, 2000; Wierson & Forehand, 1995) have found that Black and White Americans are not homogenous in

their responses to certain risk factors including the presence of mental health diagnoses, age of first arrest, crime severity, and violence exposure. Qualitative analyses suggest similar results – Black and White Americans demonstrate different experiences in response to the same risk factors (Katz, 2000; Richie, 1996). While studies have started to examine race specific risk models with individual level factors, this line of research is still in its infancy. The current study will examine both the main effect of race as well as conduct race specific analyses to determine whether different risk factors emerge.

Current Study Objectives

The literature thus far has consistently found: 1) Black Americans are more likely to experience violence exposure, engage in antisocial behavior, and reside in disadvantaged neighborhoods as compared to White Americans, and 2) both violence exposure and neighborhood disadvantage have been independently linked to antisocial behavior.

As such, the current study has two main aims:

Aim I: To systematically document the prevalence and association of two risk factors for violence, neighborhood disadvantage and violence exposure, among Black and White female juvenile offenders

Three specific questions are addressed via Aim 1:

1) What are the racial differences in the prevalence and form of neighborhood disadvantage and violence exposure among Black and White female juvenile offenders?

2) What are the associations between neighborhood disadvantage and violence exposure?

3) Do the associations between neighborhood disadvantage and violence exposure vary by race?

Based on previous research regarding the prevalence of violence exposure and the associations between neighborhood disadvantage and violence exposure two hypotheses regarding this aim are proposed:

Hypothesis I: Black female juvenile offenders will be characterized by higher levels of neighborhood disadvantage and higher levels of violence exposure than White female juvenile offenders.

Hypothesis II: Neighborhood disadvantage and violence exposure will be significantly related to one another.

Aim 2: Examine the impact of neighborhood disadvantage and violence exposure on antisocial behavior at a combined and race specific level.

Aim 2 addresses two specific questions:

1) What are the relationships between neighborhood disadvantage, witnessing violence, and experiencing violence on antisocial behavior?

2) Do the relationships between neighborhood disadvantage, witnessing violence, and experiencing violence on antisocial behavior vary by race? That is, do race specific risk models emerge?

As such, these questions determined: 1) the direct and indirect (via micro-level variables) impact of neighborhood disadvantage on antisocial behavior and 2) whether these risk factors function differently for the Black and White female juvenile offenders. Based on previous research two additional hypotheses are proposed:

Hypothesis III: At a combined level, neighborhood disadvantage will directly and indirectly impact antisocial behavior. The indirect pathway will be via violence exposure, with the relationship being stronger for witnessing violence than experiencing violence.

Hypothesis IV: Neighborhood disadvantage will add predictive value to antisocial behavior above and beyond individual level risk factors for Black girls but not for White girls.

Method

Design

This longitudinal research is part of the Gender and Aggression Project, a collaborative effort between the University of Virginia and Simon Fraser University. The current study utilized data from Waves I and II of the Virginia Site. The original sample was recruited from the single correctional center for serious and violent adolescent female offenders convicted in the Commonwealth of Virginia over an 18 month period. Ninety three percent of the girls approached at the facility participated. Wave II interviews were conducted with all girls who had been released from the correctional center for a minimum of 6 months and could be located.

Participants

Wave I. At Wave I, 122 girls were recruited from a juvenile correctional center and ranged in age from 13 to 19 years (M = 16.78; SD = 1.25). The sample represented almost every girl sentenced to secure custody in the Commonwealth of Virginia from June, 2003 to November, 2004. The larger sample was comprised of 38% White, 50% Black, and 12% of girls from other ethnicities (e.g., Native Americans, Hispanics). However, for this study only the girls who self identified as either White (n = 53) or Black (n = 69) were included.

No racial differences were found with regard to severity of previous criminal charges (t (102.38) = -1.18, p = *ns*). Official records indicated that the sample was highly aggressive; 79% had a prior violent charge (e.g., assault and battery, armed robbery, and/or attempted murder) and 95% reported engaging in violent activity prior to incarceration (e.g., armed robbery, using a weapon during a fight, a fistfight, and/or shooting at someone).

Wave II. Most girls (96%) met inclusion criteria for Wave II. Of those eligible, 43 White girls (86%) and 51 Black girls (76%) participated, yielding an 80% retention rate.

The amount of time girls had been released ranged from 6 months to 44 months (*M* = 20.16; *SD* = 8.54). Mean age for Wave II ranged from 15 to 23 years (*M* = 18.93; *SD* = 1.48).

No significant differences were present between participants at Wave I and Wave II in terms of age (*t* (115) = 0.32, *p* = *ns*), severity of previous criminal charges (*t* (115) = -0.49, *p* = *ns*), self report of previous violence (*t* (110) = -0.27, *p* = *ns*), self report of previous delinquency (*t* (110) = -0.50, *p* = *ns*), and reading achievement (*t* (108) = 0.06, *p* = *ns*). This suggests that the girls interviewed at Wave II were not younger, less severe in their offending, or more academically able than the girls who were eligible to be interviewed but were not located.

Procedure

Wave I. At Wave I, each participant completed three to four individual assessments (total of six to eight hours of interviews and self-report) which were conducted by doctoral students in psychology. Self-report measures and archival data were gathered by either graduate or advanced undergraduate students in psychology. Due to restrictions imposed by the correctional facility, no compensation other than snacks and soda were provided. Official psychological testing data (i.e., cognitive and academic achievement test results) and intake information (i.e., diagnostic information and medical history) were accessed from the Virginia Department of Juvenile Justice databases.

Wave II. Wave II data collection took place over an 18 month period (October, 2005 to April, 2007). Girls were interviewed one on one in the community, at juvenile correctional centers, or at adult jails or prisons, if they had been re-incarcerated since release (n = 14 for those re-incacerated). Three participants were not geographically accessible and were interviewed via telephone. Assessments were 90 minutes and

included interview and self report measures. Girls were compensated fifty dollars; unless they were incarcerated (due to institutional regulations).

For girls under the age of 18, active parental consent was obtained at both Waves I and II (see Appendix A). A Federal Certificate of Confidentiality from the Department of Health and Human Services was also obtained in order to protect participants and their families. Further, Internal Review Board approvals were obtained through the University of Virginia (UVA), Virginia Department of Juvenile Justice (VA-DJJ), and Virginia Department of Corrections (VA-DOC).

Measures

A multi-informant, multi-method research design was used (see Table 1). Appendix B provides a list of measures used in the current analyses.

Table 1. Key Constructs and Measures

Measures	Census Data	Self Report	VA-DJJ Database
Predictor Variables			
➢ Violence Exposure			
o Conflict Tactics Scale – Revised (4 relationships)		X	
o Community Violence Measure (3 contexts)		X	
➢ Neighborhood Variables			
o Disadvantage	X		
o Gini Index – Income Inequality	X		
Dependent Variables			
➢ Self Report of Offending – Revised Waves I & II		X	
➢ Recidivism			X
Covariates			
➢ Maternal Risk		X	
➢ Reading Achievement			X

Predictor Variables

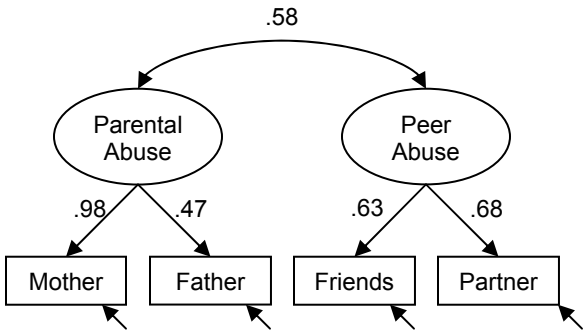
Conflict Tactics Scale-Revised (CTS-R). The CTS-R (Straus, 1979; 1995) is a self-report instrument that assesses the frequency of coercive and aggressive acts within interpersonal relationships on a 4 point scale (1 – Never; 2 – Rarely; 3 – Often; 4 – Always). Participants were asked to rate how often a specific act had been done to them within four relational contexts - *mother*, *father*, *friends*, and *romantic partne*r. Items

included whether the individual pushed, grabbed or shoved you in an argument; threw something at you; slapped you; kicked, bit or hit you; or hit you with an object.

Subscales were computed by deriving the mean score for each relationship context. Alphas for subscales suggest adequate reliability for the combined sample and among Black and White girls for abuse by *fathers* (Full Sample: α =.93, Black: α =.87, and White: α = .95); *mothers* (Full Sample: α =.87, Black: α =.83, and White: α = .92); *friends* (Full Sample: α =.79, Black: α =.72, and White: α = .92); and *romantic partners* (Full Sample: α =.93, Black: α =.93, and White: α = .94). All subscales were positively skewed and were transformed by taking the log to address violations of normality assumptions.

Confirmatory factor analyses (CFA; see Figure 1) indicated that a two factor structure, comprised of *parental physical abuse* and *peer physical abuse* (χ^2 = 7.04; RMSEA = .23; CFI = .92; SRMR = .02) fit better than a one factor structure for all *physical abuse* (χ^2 = 16.06; RMSEA = .24; CFI = .81; SRMR = .05). Based on the CFA, the maternal and paternal items were combined to create a *parental physical abuse* subscale (Full Sample: α =.90, Black: α =.81, and White: α = .95). Similarly, friends and romantic partners items were combined to create a *peer physical abuse* subscale (Full Sample: α =.87, Black: α =.85, and White: α = .89). These subscales were also transformed by taking the log.

Figure 1. Two Factor Model of Physical Abuse



Note. χ^2 = 7.04; RMSEA = .23; CFI = .92; SRMR = .02

Community Violence Measures (CMV). The CVM was comprised of 6 items that assessed whether the girl witnessed violence in the *home*, *school*, or *neighborhood* over the 6 months prior to incarceration on a 3 point scale (0 – Never; 1 – Sometimes; 2 – Always). Questions included whether she saw someone getting arrested, someone getting stabbed or shot, somebody getting beat up, guns, guns being shot, or gang activity.

Subscales were computed for each context. Alphas were adequate for violence witnessed in the *home* (Full Sample: α = .75; Black: α =.75; and White: α = .75), *school* (Full Sample: α = .79; Black: α =.81; and White: α =.76), and *neighborhood* (Full Sample: α = .91; Black: α =.92; and White: α = .91). The *neighborhood* subscale was negatively skewed and was transformed by taking the square to address violations in assumptions of normality. The *home* subscale was positively skewed and was transformed by adding one and taking the log. An Exploratory Factor Analysis (EFA) was conducted and indicated a one factor solution with all loadings above .35 (RMSR = .01). Hence, the items were computed across contexts for a total *witnessing violence* subscale (Full Sample: α = .88; Black: α =.89; and White: α = .87).

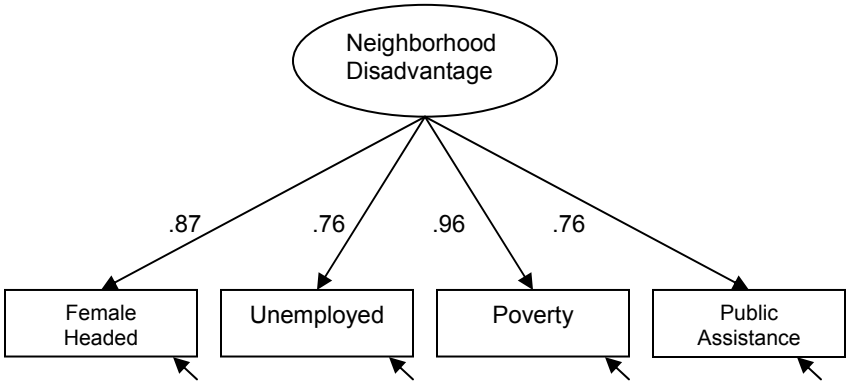
Neighborhood Disadvantage. Each girl was asked where she lived immediately prior to incarceration. Addresses were geo-coded and matched to a census tract.

Census tracts average about 4,000 people, have relatively homogenous characteristics, and are defined by significant physical boundaries such as rivers and major streets (U.S. Bureau of Census, 2001). Addresses were available for 107 girls, which resulted in the geo-coding of 94 census tracts. These tracts comprised 6% of the tracts in the state (N = 1529). Only 12 tracts had more than one girl (11 had 2 girls and 1 had 3 girls). Therefore, nested modeling was not required.

Previous research (Sampson, 1997)[2] used five items from U.S. Census data to assess *neighborhood disadvantage*: 1) percentage of people below the poverty line, 2) percentage of households on public assistance, 3) percentage of female-headed households, 4) percentage of people unemployed, and 5) percentage of Black Americans. CFA was conducted to determine whether these items represented one factor in our sample (see Figure 2). The model was fit two ways with the percentage of Black Americans as an indicator (χ^2 = 32.58; RMSEA = .23; CFI = .93; SRMR = .03) and without percentage of Black Americans as an indicator (χ^2 = 6.73; RMSEA = .15; CFI = .98; SRMR = .02). The model without percentage of Black Americans as an indicator yielded a much better model fit and made more theoretical sense. Hence, the *neighborhood disadvantage* subscale was computed using the mean of the other four items. The subscale yielded adequate reliability (Full Sample: α =.82, Black: α =.82, and White: α = .74). All indicators (except female-headed households) and the subscale were positively skewed and were transformed by adding a one and taking the log.

[2] Previous research also indicated a residential stability factor which consisted of percentage of residents in the same house as in 1995 and percentage of owner occupied houses (Sampson, 1997). However, we were unable to replicate this factor with the current data using CFA (χ^2 = 95.31; RMSEA = .23; CFI = .89; SRMR = .06) – percentage of owner occupied houses yielded a negative covariance residual. Therefore, we examined only neighborhood disadvantage.

Figure 2. One Factor Model of Neighborhood Disadvantage



Note. χ^2 = 6.73; RMSEA = .15; CFI = .98; SRMR = .02

Gini Index - Income Inequality. This Gini index is a popular measure among sociologists of relative inequality (Pederson, 2004). It was created by using the *ineq* function in R; this function computes the inequality within a vector for the specific inequality index (such as concentrated poverty, Gini index, etc). In this case, the vector of household income distribution within each census tract was used to calculate the Gini Index for each girl's census tract. This index is scaled from 0 to 1, with a 0 indicating that all households have similar incomes and 1 indicating that income is quite disparate. Income inequality in the sample (*M* = .40; *SD* = .07) was almost equivalent to income inequality in the United States based on 2000 census data (M = .43; U.S. Census Bureau, 2008).

Dependent Variables

Self Report of Offending-Revised (SRO-R). The SRO-R assessed Wave I and II antisocial behavior (Elliott, Huizinga, & Menard, 1989). The *violent* subscale included: 1) carrying a gun, 2) using a weapon to get money or things from people, 3) using a weapon while fighting another person, 4) participating in gang activity, 5) engaging in fistfights, 6) attacking someone with the idea of seriously hurting or killing them, and 7) shooting at someone. The *delinquent* subscale included 1) driving drunk, 2) selling

marijuana, 3) selling hard drugs, 4) breaking in or trying to break into a building or vehicle to steal something, 5) stealing or trying to steal a vehicle to keep or sell, and 6) being paid to have sexual relations with someone.

Wave I alphas were acceptable for *violent* (Full Sample: α =.74, Black: α =.72, and White: α = .77), *delinquent* (Full Sample: α =.75, Black: α =.76, and White: α = .74) and *total* count of offenses (Full Sample: α =.83, Black: α =.83, and White: α =.84). Wave II alphas were also acceptable for *violent* (Full Sample: α =.70, Black: α =.71, and White: α = .70) and *total* offenses (Full Sample: α =.77, Black: α =.77, and White: α =.78). The alpha for the *delinquent* subscale was lower for White girls (Full Sample: α =.68, Black: α =.73, and White: α = .61). Wave II variables were positively skewed; therefore, a one was added before taking the log of all three variables for transformation.

DJJ Official Arrest Data[3]*.* Rearrest data were accessed through the VA-DJJ official records system. Police records were reviewed electronically for all girls who had been released from the correctional facility for at least 12 months by December, 2006. At that time, data were available on 92% of the sample (N =112 girls, White n = 50, Black n = 62) who had been released for an average of two years (*M* =28.13 months; *SD* = 6.98). Data were coded into official arrest and whether the most serious offense was violent or non-violent in nature (see Appendix C for a breakdown of the categories).

Covariates

Reading Achievement. Academic achievement was included as a covariate since it is an important arena to consider with juvenile offenders (Bellair & McNulty, 2005; Fergusson, 1995). Given that previous work has focused on verbal ability (Bellair & McNulty, 2005) and that reading is the basis for other forms of achievement including math achievement (Grimm, 2006), the current analyses only included reading

[3] Rearrest data do not include technical violations such as parole violation or probation violation.

achievement scores. The Woodcock Johnson III Achievement (Woodcock & Johnson, 1989) tests were used to assess reading achievement. This test was administered at the state's Reception and Diagnostic Center (RDC) after the girls' were adjudicated and were available through the VA-DJJ database.

Maternal Risk Factors. A global index of maternal risk was calculated to serve as proxy for other familial risk factors. Family characteristics such as maternal criminality and maternal substance use are associated with both neighborhood characteristics and youth outcomes (Fergusson & Horwood, 2002; Hoyt & Scherer, 1998; Leve & Chamberlain, 2004; McLeod & Nonnemaker, 2000). Further, several researchers have argued that studies that do not adjust for family characteristics cannot truly estimate neighborhood effects given that family factors influence both selection of neighborhoods and adolescent outcomes (Ingolsby & Shaw, 2002; Leventhal & Brooks-Gunn, 2000). Hence, a composite score of maternal risk was created from three items assessed at Wave I including whether the girl's mother had been arrested or convicted of a crime, had a problem with alcohol, and had a problem with drug use. Alphas were acceptable (Full Sample: α =.77, Black: α =.69, and White: α = .85). Identifying a composite score based on internal consistency precluded the use of other items such as maternal education and maternal mental illness.

Analyses

Analyses I. Racial Difference in the Prevalence of Predictors, Covariates, and Outcomes.

First, basic descriptive information was examined for predictors (i.e., neighborhood disadvantage and violence exposure), covariates (i.e., time at risk, age, reading achievement, and maternal risk) and outcomes (i.e., antisocial behavior). Given the unique profile of this sample, factor analyses and alphas were examined for each subscale to determine whether empirically meaningful subscales existed or could be

replicated based on previous research. Independent sample T-tests were then conducted to evaluate the first hypothesis, which posited that Black female juvenile offenders will be characterized by higher levels of neighborhood disadvantage and violence exposure than White female juvenile offenders. Independent Sample T-tests and Chi Square Analyses were used to test whether covariates and outcomes differed by race.

Analyses II. Bivariate Correlations

Second, bivariate associations, at a combined and race specific level were used to examine whether neighborhood disadvantage, violence exposure, and antisocial behavior were significantly associated with one another. This step evaluated the second hypothesis that neighborhood disadvantage and violence exposure variables will be significantly related to one another. Further, combined and race specific associations among all variables were explored at a bivariate level before entering them into the structural model.

Analyses III-V. Structural Equation Models for Antisocial Behavior.[4]

Lastly, a series of structural models were conducted to evaluate the relationships between neighborhood disadvantage, violence exposure, and antisocial behavior on female juvenile offenders.

Mplus Version 5.0 (Muthén & Muthén, 2008) was used for all structural equation modeling (SEM). Mplus has two major benefits: 1) it handles missing data by utilizing the Full Information Maximum Likelihood (FIML) method, a model dependent procedure that uses all available data points to construct the best possible estimates, and 2) it offers the unique ability to model categorical outcomes (i.e., recidivism) along with continuous variables within an SEM framework. Best fitting models were evaluated

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[4] Structural models for the Gini Index are presented in Appendix D.

based on the chi square difference test and standard fit indices including Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR) and Weighted Root Mean Square Residual (WRMR). Given that chi square tests can often be biased by sample size, CFI, RMSEA, SRMR, and WRMR were also considered. CFI values that approach 1 are considered a good fit to the data (i.e., .90 to 1.0) and values from .80 to .90 suggest an adequate fit. RMSEA values of .05 or less indicate a close fit and .06 to .08 demonstrate a reasonable fit; while above .10 is considered inadequate (Browne & Cudeck, 1993). SRMR provides unbiased estimates of the residual covariance and a value of less than .08 is a considered a good fit (Hu & Bentler, 1999; 2000). Finally, WRMR is the most reliable index for categorical outcomes and was used for recidivism - estimates below .95 connote an acceptable fit to the data (Yu, 2002). The primary interest in all models was based on *relative* fit, model parsimony, and variance explained. However, absolute fit indices were also examined. Given that each model estimates 15 to 17 parameters, latent variables for violence exposure and neighborhood disadvantage were not utilized due to power issues.

SEM modeling was done in two stages for: 1) Wave I antisocial behaviors (total, violent, and delinquent), 2 Wave II antisocial behaviors (total, violent, and delinquent), and 3) recidivism (general, violent, and non-violent).

First, analyses were conducted to find the best fitting model for neighborhood disadvantage, violence exposure, and antisocial behavior and to determine whether direct effects existed for the group as a whole. Then, based on Baron and Kenney's (1986) mediation test, indirect effects were examined if a relationship existed between 1) neighborhood disadvantage and antisocial behavior; 2) neighborhood disadvantage and the mediator (e.g., violence exposure); and 3) the mediator (violent exposure) and antisocial behavior. This first step tested the third hypothesis which posited that

neighborhood disadvantage will directly and indirectly impact antisocial behavior, with the indirect relationship being stronger for witnessing violence than experiencing violence.

Second, race specific models were conducted to find the best fitting model for each group using multiple group analyses. Each pathway was compared to determine whether it was significantly different for Black and White female juvenile offenders. Since these analyses usually require large sample sizes (> 100 per group), importance will be placed on relative fit indices. Next, if a significant relationship is observed between neighborhood disadvantage and antisocial behavior at a simultaneous level, the fourth hypothesis that neighborhood disadvantage will add predictive value to antisocial behavior above and beyond individual level risk factors for Black girls but not for White girls, was examined by conducting race specific hierarchical regressions. Either a multiple (continuous outcome) or a logistic (categorical outcome) regression was used with SPSS Version 14, Block Entry design. The first block contained the micro-level variables that were significant at the simultaneous level and the second block contained neighborhood disadvantage. This strategy determined if neighborhood disadvantage had predictive validity beyond micro-level risk factors for each group.

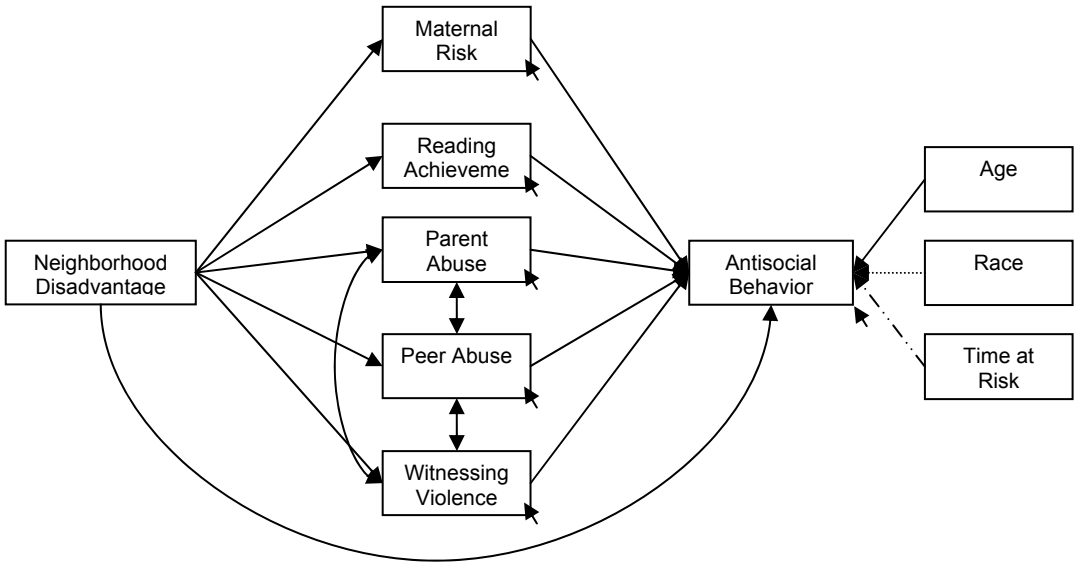
Analyses III. Wave I Antisocial Behavior

A series of structural models were fit using the Maximum Likelihood (ML) estimator to determine the best fitting model for Wave I antisocial behavior. Figure 3 shows the parameters that were estimated between neighborhood disadvantage and 1) maternal risk; 2) reading achievement; 3) parental abuse; 4) peer abuse and 5) witnessing violence; as well as between antisocial behavior and 1) maternal risk; 2) reading achievement; 3) parental abuse; 4) peer abuse; 5) witnessing violence; 6) neighborhood disadvantage; 7) age; and 8) race. The three forms of violence exposure were allowed to be correlated with one another. The model in Figure 3 was tested on

three different indices 1) total antisocial behavior, 2) violent behavior, and 3) delinquent behavior. In all models, each pathway was set to zero in a sequential order to detect which pathways are substantially contributing to the outcome. The models that look at multiple parameters simultaneously were informed by the individual parameter testing to determine the most optimal model for each outcome.

Next, race specific analyses were conducted to evaluate whether racial differences existed with regard to the specific pathways summarized above. Instead of setting each parameter to zero, the pathways were sequentially set to be equal for the two groups. A significant misfit indicated that the pathway functioned differently for the two groups. Optimal models for Black and White girls were informed by individual parameter testing and the best fitting model from the combined sample.

Figure 3. Baseline Model for Structural Models



Note. ◄····· denotes that the pathway was not tested in race specific analyses.
◄— · · — denotes that the pathway was only tested for future antisocial behavior.

Analyses IV. Wave II Antisocial Behavior

Structural models for Wave II antisocial behavior were similar to those for Wave I antisocial behavior with two main differences: 1) age at Wave II was used and 2) time

at risk between release and Wave II interview was added to each model. Three different indices of antisocial behavior were examined: 1) total antisocial behavior, 2) violent behavior, and 3) delinquent behavior. The same analytic strategy described above for Wave I antisocial behavior was adopted to examine race specific structural models.

Analyses V. Recidivism

Since recidivism is a categorical (rearrest) outcome, model evaluation was based on the Probit function using the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator. This estimator does not compute the conventional chi square difference test because the differences are not distributed as a chi square. Therefore, the mean adjusted robust chi square difference test (the DIFFTEST function in MPlus) was implemented to calculate appropriate chi square differences when comparing the fit of nested models. Structural models for recidivism evaluated the same relative contributions as that for Wave II antisocial behavior, with two main changes, 1) age at the time of last recidivism run was used and 2) time at risk was calculated as the time between release and the last recidivism run. Race specific models of recidivism were evaluated using the same analytic strategy described above.

Results

Results I. Racial Differences in the Prevalence of Predictors, Covariates, and Outcomes.

Predictor Variables. With regard to violence exposure, the majority of girls experienced violence by parents (65%) and by peers (75%). Virtually all girls (98%) reported witnessing violence with the estimates being lower for home (66%) compared to school (94%) and neighborhood (94%). Table 2 displays levels of experienced violence, witnessed violence, and neighborhood disadvantage by race. In terms of violence exposure, there were no racial differences in physical abuse or witnessed violence. However, significant racial differences were observed in the levels of neighborhood disadvantage with Black girls living in more disadvantaged neighborhoods

than White girls, including neighborhoods with higher percentages of female-headed households, people unemployed, households on public assistance, and people below the poverty line. Similarly, the Gini index for income inequality was significantly higher for Black girls compared to White girls which suggests that Black girls lived in neighborhoods with greater income disparity than White girls. .

Table 2. Descriptive Statistics for Violent Exposure and Neighborhood Level Variables.

	Total	White	Black	*t*	*d*
Parental Physical Abuse	1.35 (0.54)	1.41 (0.67)	1.31 (0.40)	0.56	*ns*
➢ Mother	1.39 (0.59)	1.39 (0.65)	1.39 (0.55)	-0.24	*ns*
➢ Father‡	1.33 (0.66)	1.46 (0.84)	1.23 (0.47)	1.77	*ns*
Peer Physical Abuse	1.50 (0.54)	1.47 (0.57)	1.52 (0.52)	-0.71	*ns*
➢ Friends	1.45 (0.52)	1.48 (0.61)	1.42 (0.44)	0.27	*ns*
➢ Romantic Partner	1.55 (0.77)	1.46 (0.72)	1.63 (0.80)	-1.36	*ns*
Witnessing Violence	0.76 (0.38)	0.75 (0.38)	0.77 (0.38)	-0.35	*ns*
➢ Home	0.26 (0.35)	0.31 (0.38)	0.22 (0.33)	1.52	*ns*
➢ School	0.76 (0.46)	0.77 (0.43)	0.76 (0.49)	0.12	*ns*
➢ Neighborhood	1.26 (0.65)	1.16 (0.66)	1.35 (0.63)	-1.56	*ns*
Neighborhood Disadvantage‡	0.15 (0.08)	0.11 (0.04)	0.18 (0.09)	-4.79***	0.94
➢ Female Headed‡	0.35 (0.15)	0.27 (0.09)	0.41 (0.17)	-5.36***	1.12
➢ Unemployed‡	0.06 (0.05)	0.04 (0.02)	0.08 (0.06)	-4.90***	1.13
➢ Public Assistance‡	0.04 (0.04)	0.03 (0.02)	0.05 (0.04)	-3.22**	0.67
➢ Below Poverty‡	0.14 (0.10)	0.10 (0.06)	0.17 (0.12)	-4.46***	0.93
Gini Index (Relative Inequality)	0.40 (0.07)	0.38 (0.05)	0.42 (0.07)	-3.77***	0.74

Note. *** p < .001. ** p < .01. * p < .05. ‡Levene's test was significant and equality of variances were not assumed[5]. T-tests are based on transformed variables. Untransformed values are reported in this table for interpretation purposes.

Covariates. Reading achievement was in the average range but White girls had higher reading achievement scores than Black girls (see Table 3). High rates of maternal risk factors were observed with about half of the girls (49%) indicating that their mother had been arrested or convicted of a crime or experienced substance abuse. There were no racial differences in levels of maternal risk, age, and time at risk.

[5] For all variables where equality of variances was not assumed, the Wilcoxon rank transform test was also conducted. An identical pattern of results were attained. T-tests are reported for uniformity.

Table 3. Descriptive Statistics for Covariates.

	Total	White	Black	*t*	*d*
Reading Achievement	94.04 (11.83)	97.90 (11.88)	91.28 (11.07)	3.06**	0.58
Maternal Risk ٤	0.89 (1.13)	0.98 (1.25)	0.82 (1.03)	0.71	*ns*
Age at Wave 1	16.78 (1.24)	16.80 (1.18)	16.76 (1.30)	0.17	*ns*
Age at Wave 2	18.93 (1.48)	18.94 (1.36)	18.92 (1.58)	0.07	*ns*
Age at Record Check	19.56 (1.35)	19.64 (1.29)	19.50 (1.40)	0.54	*ns*
Time at Risk (Wave 2)	20.16 (8.54)	19.40 (8.23)	20.83 (8.82)	-0.80	*Ns*
Time at Risk (Re-arrest)	28.14 (6.98)	28.20 (7.34)	28.08 (6.74)	0.09	*Ns*

Note. *** p < .001. ** p < .01. * p < .05. ٤Levene's test was significant and equality of variances were not assumed.

Antisocial Behavior. Table 4 illustrates levels of Wave I and II antisocial behavior and official recidivism. Virtually all girls (97%) endorsed some form of antisocial behavior in Wave I with most (95%) engaging in violent behaviors. At Wave II, the majority of girls (60%) continued to engage in antisocial behavior with about half (54%) engaging in violent behaviors. There were no significant racial differences in self report of offending either at Waves I or II. About half of the girls were rearrested with more having charges for nonviolent offenses than for violent offenses. In contrast to self report of offending, Black girls were more likely to get rearrested; this was true for non-violent but not violent crimes.

Table 4. Descriptive Statistics for Antisocial Behavior

	Total	White	Black	*t*	*d*
Self Report of Offending Wave I					
➢ Total	5.14 (3.40)	5.50 (3.54)	4.84 (3.28)	1.03	*ns*
➢ Violent	3.05 (1.94)	3.13 (2.08)	2.98 (1.83)	0.42	*ns*
➢ Delinquent	2.11 (1.87)	2.41 (1.88)	1.86 (1.84)	1.61	*ns*
Self Report of Offending Wave II					
➢ Total	1.61 (2.07)	1.70 (2.18)	1.53 (1.99)	0.30	*ns*
➢ Violent	1.00 (1.32)	1.07 (1.39)	0.94 (1.27)	0.31	*ns*
➢ Delinquent	0.61 (1.11)	0.63 (1.07)	0.59 (1.15)	0.39	*ns*
Official Recidivism				X^2	Φ
➢ Rearrested	58 (52%)	17 (34%)	41 (66%)	11.44**	.32
➢ Violent	25 (22%)	8 (16%)	17 (27%)	2.08	*ns*
➢ Non-Violent	33 (30%)	9 (18%)	24 (39%)	5.71*	.23

Note. *** p < .001. ** p < .01. * p < .05. T-tests are based on transformed variables at Wave II. Untransformed values are reported in this table for interpretation purposes.

Results II Bivariate Correlations.

Violence Exposure. Table 5 displays the associations between levels of experienced and witnessed violence. Parental abuse was moderately related with peer abuse at the combined and race specific level. It was also significantly associated with witnessing violence for the group as a whole and for White girls. Peer abuse had a small association with witnessing violence; with similar levels for both groups. Within parental abuse, a stronger co-occurrence was observed between maternal and paternal abuse among White girls than among Black girls. However, the correlations between romantic partner abuse and peer abuse were similar for the two groups. Additionally, witnessing violence in the neighborhood is more likely to co-occur with witnessing violence in school and less likely to co-occur with witnessing violence within the home. Similar relationships between the different contexts of witnessing violence were observed for Black and White girls.

Table 5. Pearson's Correlations among Violence Exposure Variables

		Parent	Mother	Father	Peer	Friend	Partner	Witness	Home	School
Parental Physical Abuse		1.00								
	Black									
	White									
➢ Mother		0.82***	1.00							
	Black	0.82***								
	White	0.85***								
➢ Father		0.87***	0.45***	1.00						
	Black	0.76***	0.27*							
	White	0.95***	0.66***							
Peer Physical Abuse		0.36***	0.44***	0.19*	1.00					
	Black	0.41**	0.45***	0.16						
	White	0.33*	0.44**	0.25						
➢ Friends		0.39***	0.35***	0.30**	0.78***	1.00				
	Black	0.40**	0.37**	0.25	0.73***					
	White	0.37**	0.33*	0.34*	0.85***					
➢ Romantic Partner		0.24*	0.38***	0.06	0.89***	0.43***	1.00			
	Black	0.32*	0.39**	0.08	0.92***	0.41**				
	White	0.20	0.38**	0.10	0.86***	0.47**				
Witnessing Violence		0.34***	0.19*	0.36***	0.28**	0.30**	0.21*	1.00		
	Black	0.13	0.02	0.16	0.28*	0.32*	0.22			
	White	0.54***	0.37**	0.55***	0.27	0.28*	0.21			
➢ Home		0.23*	0.09	0.27**	0.12	0.20*	0.02	0.58***	1.00	
	Black	0.01	0.08	-0.12	0.24	0.33*	0.11	0.58***		
	White	0.37*	0.12	0.48**	0.03	0.09	-0.03	0.62***		
➢ School		0.32**	0.19*	0.33**	0.18	0.22*	0.13	0.82***	0.34**	1.00
	Black	0.04	-0.05	0.10	0.11	0.18	0.06	0.84***	0.37**	
	White	0.58***	0.46**	0.55***	0.27	0.26	0.24	0.78***	0.31*	
➢ Neighborhood		0.27**	0.17	0.27**	0.34***	0.29**	0.31**	0.83***	0.22*	0.52***
	Black	0.22	0.06	0.31*	0.36**	0.31*	0.34**	0.83***	0.22	0.53***
	White	0.33*	0.29*	0.30*	0.31*	0.28	0.26	0.84***	0.27	0.51***

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

Neighborhood Disadvantage. Table 6 summarizes the associations between the indices of neighborhood disadvantage. All indicators were significantly related to each other at both a combined and race specific level. The Gini index was also significantly related with neighborhood disadvantage and its indicators at a combined level and for Black girls but associations were not significant for White girls with regard to income inequality and percentage of female-headed households and percentage of people unemployed.

Table 6. Pearson's Correlations among Neighborhood Level Variables

	NIDS	FHH	UNEM	PAS	POV	GINI
Neighborhood Disadvantage	1.00					
Black						
White						
Female Headed Households	0.94***	1.00				
Black	0.95***					
White	0.92***					
Unemployed	0.73***	0.67***	1.00			
Black	0.73***	0.63***				
White	0.58***	0.44**				
Public Assistance	0.77***	0.74***	0.65***	1.00		
Black	0.75***	0.73***	0.64***			
White	0.77***	0.66***	0.43**			
Poverty	0.92***	0.88***	0.75***	0.74***	1.00	
Black	0.92***	0.89***	0.73***	0.69***		
White	0.88***	0.72***	0.58***	0.82***		
Gini Index (Relative Inequality)	0.66***	0.61***	0.53***	0.55***	0.71***	1.00
Black	0.70***	0.66***	0.53***	0.52***	0.72***	
White	0.40**	0.17	0.25	0.44**	0.49***	

Note. *** p < .001. ** p < .01. * p < .05.

Violence Exposure and Neighborhood Disadvantage. Table 7 illustrates the relationship between neighborhood level variables and violence exposure variables. Surprisingly, there were few significant associations between violence exposure and neighborhood disadvantage. Only witnessing neighborhood violence was significantly associated with neighborhood disadvantage and percentage of female-headed households. Hence, the hypothesis that neighborhood disadvantage would be significantly related to violence exposure was not supported.

Table 7. Pearson's Correlations among Violence Exposure Variables and Neighborhood Level Variables

	Neighborhood Disadvantage	Female Headed Houses	Unemployed	Public Assistance	Poverty	Gini Index
Parental Physical Abuse	-0.07	-0.12	-0.04	-0.04	-0.06	-0.05
Black	-0.17	-0.14	-0.07	0.00	-0.14	-0.16
White	0.10	-0.01	0.15	-0.05	0.12	0.14
➢ Mother	-0.08	-0.08	-0.09	-0.02	-0.07	-0.02
Black	-0.18	-0.12	-0.08	-0.03	-0.14	-0.15
White	0.07	0.00	-0.14	0.01	0.06	0.19
➢ Father	-0.09	-0.15	-0.06	-0.08	- 0.08	-0.09
Black	-0.11	-0.13	-0.06	0.00	-0.10	-0.12
White	0.08	-0.02	0.21	-0.09	0.09	0.06
Peer Physical Abuse	-0.05	-0.03	-0.06	0.03	-0.01	-0.08
Black	-0.10	-0.03	-0.10	0.01	-0.05	-0.12
White	0.00	-0.09	-0.05	0.07	0.05	-0.04
➢ Friends	-0.17	-0.19	-0.19	-0.13	-0.16	-0.13
Black	-0.27*	-0.24	-0.25	-0.20	-0.24	-0.16
White	-0.01	-0.09	-0.04	0.03	0.03	-0.06
➢ Romantic Partner	0.05	0.08	0.05	0.12	0.08	-0.02
Black	0.02	0.10	0.01	0.12	0.06	-0.08
White	-0.01	-0.08	0.00	0.03	0.05	-0.02
Witnessing Violence	0.14	0.10	-0.02	0.00	0.05	-0.09
Black	0.10	0.06	-0.11	0.08	0.02	-0.06
White	0.23	0.22	0.32*	-0.16	0.15	-0.15
➢ Home	-0.12	-0.12	-0.16	-0.22*	-0.13	-0.15
Black	-0.03	-0.05	-0.15	-0.06	-0.03	0.02
White	-0.08	-0.05	0.00	-0.44**	-0.14	-0.23
➢ School	0.00	-0.07	-0.11	-0.13	-0.05	-0.14
Black	-0.12	-0.16	-0.23	-0.15	-0.16	-0.21
White	0.26	0.21	0.39**	-0.04	0.26	0.01
➢ Neighborhood	0.27*	0.25*	0.09	0.19	0.16	0.01
Black	0.22	0.21	-0.01	0.23	0.10	0.00
White	0.28	0.27	0.26	0.00	0.17	-0.11

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

Predictor Variables with Wave I Antisocial Behavior[6]*.* As Table 8 illustrates, a small but significant association existed between parental abuse and total antisocial behavior and violent behavior. When breaking this down by race, these relationships remained significant for White girls but not for Black girls. On the other hand, a consistent, moderate relationship was found between peer abuse and all forms of offending for the combined sample and at a race specific level. Witnessing violence was also moderately correlated to all forms of offending but the associations were more robust for White girls. Witnessing violence was not significantly related to delinquent behaviors for Black girls. Surprisingly, neither neighborhood disadvantage nor income inequality were related with Wave I offending.

Table 8. Pearson's Correlations among Predictor Variables and Wave I Antisocial Behavior

		SRO W1 Total	SRO W1Violent	SRO W1 Delinquent
Parental Physical Abuse		0.24*	0.31*	0.11
	Black	0.14	0.22	0.03
	White	0.33*	0.38*	0.19
Peer Physical Abuse		0.44***	0.40***	0.38***
	Black	0.43***	0.39**	0.37**
	White	0.47**	0.43**	0.42**
Witnessing Violence		0.49***	0.56***	0.31**
	Black	0.36**	0.45***	0.19
	White	0.63***	0.67***	0.44**
Neighborhood Disadvantage		-0.02	-0.01	-0.05
	Black	-0.03	-0.04	-0.02
	White	0.12	0.11	0.07
Gini Index		-0.12	-0.12	-0.11
	Black	-0.07	-0.10	-0.02
	White	-0.12	-0.10	-0.12

Note. *** p < .001. ** p < .01. * p < .05.

[6] Tables 8 and 9 presents only broader subscale level information, for the more individual subscales please refer to Appendix E.

Predictor Variables with Wave II Antisocial Behavior and Recidivism. Table 9 displays the pattern of associations between Wave II self reported antisocial behavior and parent abuse, peer abuse, and witnessing violence. In terms of violent behaviors, parental abuse was a significant predictor for White girls while witnessing violence was a significant predictor for Black girls. Further, neighborhood disadvantage and witnessing violence were the only significant relationships present for general recidivism and non-violent recidivism. Race specific analyses found that these relationships remained significant for Black girls. In terms of the Gini Index, no significant relationships emerged.

Table 9. Pearson's and Point Biserial Correlations among Predictor Variables with Wave II Antisocial Behavior and Recidivism

		SRO W2 Total	SRO W2 Violent	SRO W2 Delinquent	General Recidivism	Violent Recidivism	Non-Violent Recidivism
Parental Physical Abuse		0.25*	0.33*	0.10	0.08	0.12	-0.02
	Black	0.17*	0.25	0.01	-0.14	-0.04	-0.10
	White	0.32*	0.40*	0.17	0.36*	0.33*	0.11
Peer Physical Abuse		0.15	0.23*	0.08	0.01	-0.05	0.06
	Black	0.18	0.24	0.11	-0.02	-0.14	0.11
	White	0.13	0.23	0.04	0.03	0.07	-0.04
Witnessing Violence		0.27*	0.29*	0.20	0.22*	0.14	0.12
	Black	0.37*	0.37*	0.28	0.22	0.09	0.13
	White	0.15	0.19	0.08	0.23	0.20	0.09
Neighborhood Disadvantage		-0.07	-0.07	-0.08	0.24*	-0.04	0.29*
	Black	0.01	0.01	0.00	0.26	0.01	0.25
	White	-0.17	-0.15	-0.24	-0.12	-0.27	0.12
Gini Index		0.03	0.01	0.01	0.17	0.03	0.17
	Black	0.15	0.11	0.13	0.12	0.00	0.12
	White	-0.13	-0.05	-0.19	-0.02	-0.02	-0.01

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

Outcomes. With regard to self report of offending, there were moderate to large associations between the violent and delinquent behaviors within Wave I and within Wave II (see Table 10). There was a small association between Wave I antisocial behavior and Wave II antisocial behavior; with the association being significant for Black girls but not for White girls. This suggests that all girls were less likely to engage in antisocial behavior at Wave II, with the decline being stronger for White girls. With regard to recidivism, self report of violent behavior was slightly related to violent recidivism; but non-violent recidivism was not associated with self report of delinquent behaviors.

Table 10. Pearson's Correlations among Forms of Antisocial Behavior

	SRO Tot 1	SRO Vio 1	SRO Del 1	SRO Tot 2	SRO Vio 2	SRO Del 2	Recid	Viol. Recid	NonV Recid
SRO W1 Total	1.00								
Black									
White									
➢ Violent	0.90***	1.00							
Black	0.89***								
White	0.91***								
➢ Delinquent	0.89***	0.60***	1.00						
Black	0.89***	0.58***							
White	0.89***	0.62***							
SRO W2 Total	0.25*	0.25*	0.22*	1.00					
Black	0.36*	0.36*	0.30*						
White	0.14	0.15	0.13						
➢ Violent	0.21	0.21	0.05	0.88***	1.00				
Black	0.19	0.26	0.09	0.86***					
White	0.08	0.16	0.01	0.91***					
➢ Delinquent	0.35**	0.27**	0.38***	0.79***	0.46***	1.00			
Black	0.46**	0.40**	0.45**	0.78***	0.39**				
White	0.23	0.15	0.30	0.81***	0.54***				
Recidivism	-0.12	-0.02	-0.18	0.18	0.18	0.07	1.00		
Black	-0.10	-0.01	-0.17	0.19	0.15	0.08			
White	-0.08	0.02	-0.12	0.21	0.27	0.09			
➢ Violent	-0.15	-0.07	-0.16	0.19	0.28**	-0.02	0.52***	1.00	
Black	-0.18	-0.08	-0.23	0.12	0.25	-0.16	0.44***		
White	-0.07	-0.03	-0.03	0.32*	0.35*	0.21	0.61***		
➢ Non-Violent	0.00	0.04	-0.05	0.02	-0.06	0.10	0.62***	-0.35***	1.00
Black	0.07	0.07	0.05	0.08	-0.10	0.23	0.60***	-0.49***	
White	-0.03	0.04	-0.12	-0.05	-0.01	-0.09	0.65***	-0.20***	

Note. *** p < .001. ** p < .01. * p < .05.

Covariates with Outcomes. Table 11 summarizes the associations between the covariates and the outcomes in order to explore the nature of these relationships before testing their influence in structural models. Reading achievement was inversely associated with rearrest, such that those with higher reading achievement were less likely to get rearrested, but was not associated with self report of offending. Maternal risk was positively associated with Wave I antisocial behavior but not Wave II antisocial behavior. It was expected that as girls aged they would be less likely to get rearrested; this was true for violent charges and self report of violent behaviors. However, older Black girls were more likely to report engaging in delinquent acts at Wave II.

Table 11. Pearson's Correlations among Covariates and Antisocial Behavior

		Reading Achievement	Maternal Risk	Age-W1	Time at Risk
SRO W1 Total		0.14	0.24*	0.02	
	Black	0.18	0.23	0.19	
	White	0.05	0.23	-0.20	
➢ Violent		0.11	0.24*	-0.05	
	Black	0.20	0.18	0.08	
	White	-0.02	0.29*	-0.20	
➢ Delinquent		0.17	0.20*	0.09	
	Black	0.12	0.23	0.25*	
	White	0.15	0.16	-0.13	
				Age – W2	Time – 2
SRO W2 Total		0.01	0.11	-0.07	0.21*
	Black	0.06	0.14	-0.03	0.20
	White	-0.09	0.08	-0.13	0.23
➢ Violent		-0.05	-0.01	-0.22*	0.10
	Black	0.03	-0.05	-0.30*	0.04
	White	-0.19	0.01	-0.12	0.19
➢ Delinquent		0.08	0.18	0.19	0.28**
	Black	0.08	0.24	0.33*	0.26
	White	0.05	0.13	-0.12	0.32*
				Age – R	Time – R
Recidivism		-0.20*	0.11	-0.17	0.03
	Black	-0.11	0.24	-0.12	0.18
	White	-0.15	0.06	-0.21	0.29*
➢ Violent		-0.12	0.13	-0.25**	-0.02
	Black	-0.17	0.13	-0.28*	-0.17
	White	0.07	0.17	-0.18	0.18
➢ Non-Violent		-0.11	0.13	0.04	0.06
	Black	0.05	0.12	0.14	-0.02
	White	-0.23	-0.10	-0.08	0.18

Note. *** p < .001. ** p < .01. * p < .05. Age and Time at Risk differ by Outcome of Wave II or Recidivism Run.

Results III. Wave I Antisocial Behavior.

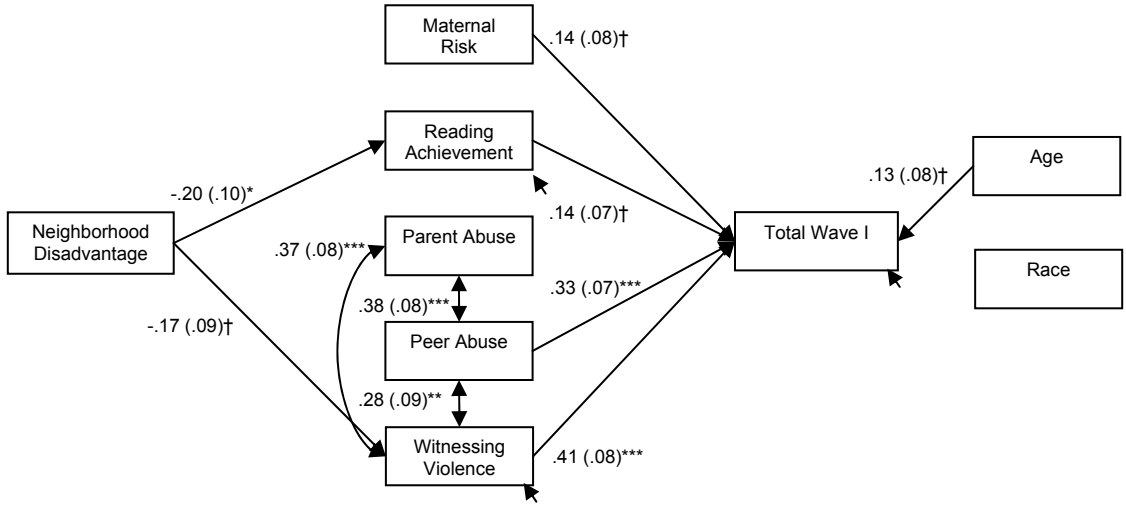
Three sets of nested models were evaluated to determine the simultaneous impact of neighborhood disadvantage and violence exposure on 1) total antisocial behavior; 2) violent behavior; and 3) delinquent behavior. As stated before, information from individual parameter testing was used to determine the most optimal model for all three outcomes. Optimal models were chosen based on relative fit, model parsimony, and variance explained. Standardized coefficients are reported which allow for comparability of the relative strength of each pathway.

Total Antisocial Behavior. The baseline model yielded adequate fit indices and explained 41% of the variance in total antisocial behavior at Wave 1 (see Table 12). As illustrated by Figure 4, living in a disadvantaged neighborhood was related to lower reading achievement scores. Neighborhood disadvantage was not significantly associated with other variables in the model. Next, in terms of antisocial behavior, two significant associations were present; peer physical abuse (Model 10) and witnessing violence (Model 11). Setting either of these parameters to zero led to significant model misfit. Peer physical abuse accounted for about 10% of the variance while witnessing violence accounted for 13% of the variance in antisocial behavior. Based on individual parameter testing, three more models were tested. Model 18 (see Figure 4) was retained as the best fitting model; it was an improvement in terms of fit indices relative to the baseline model and retained an equivalent amount of variance explained. Within this model, witnessing violence and peer abuse were strongly associated with Wave I antisocial behavior, with witnessing violence being a stronger correlate than peer abuse.

Table 12. Fit Statistics for Wave I Offending - Total Antisocial Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	30.99		17			0.85	0.08	0.07	.41
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	31.13	0.14	18	1	No	0.86	0.08	0.07	.41
Model 3. Reading Achievement	**34.95**	**3.96**	**18**	**1**	**Yes**	**0.82**	**0.09**	**0.08**	**.41**
Model 4. Parental Abuse	31.34	0.35	18	1	No	0.86	0.08	0.07	.41
Model 5. Peer Abuse	31.10	0.11	18	1	No	0.86	0.08	0.07	.41
Model 6. Witnessing Violence	32.88	1.89	18	1	No	0.84	0.08	0.08	.42
Predictors to Wave I Offending - Total									
Model 7. Maternal Risk	34.31	3.32	18	1	No	0.83	0.09	0.08	.41
Model 8. Reading Achievement	33.67	2.68	18	1	No	0.84	0.08	0.08	.39
Model 9. Parental Abuse	31.17	0.18	18	1	No	0.86	0.08	0.07	.41
Model 10. Peer Abuse	**47.57**	**16.58**	**18**	**1**	**Yes**	**0.69**	**0.12**	**0.09**	**.32**
Model 11. Witnessing Violence	**50.79**	**19.80**	**18**	**1**	**Yes**	**0.66**	**0.12**	**0.09**	**.28**
Model 12. Neighborhood Disadvantage	31.00	0.01	18	1	No	0.86	0.07	0.07	.41
Model 13. Age	33.23	2.40	18	1	No	0.84	0.08	0.07	.38
Model 14. Race (0 = White; 1 = Black)	31.93	0.94	18	1	No	0.85	0.08	0.07	.41
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	47.22	16.23	18	1	Yes	0.70	0.12	0.09	.39
Model 16.Parent Abuse with Witnessing Violence	47.64	16.65	18	1	Yes	0.69	0.12	0.09	.39
Model 17.Peer Abuse with Witnessing Violence	40.07	9.08	18	1	Yes	0.77	0.10	0.09	.36
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 9, 12 and 14	**32.64**	**1.65**	**23**	**6**	**No**	**0.90**	**0.06**	**0.08**	**.41**
Model 19. Model 18 plus 6 and 13	38.70	7.71	25	8	No	0.86	0.07	0.08	.38
Model 20. Model 18 plus 6, 7, 8, and 13	45.99	15.00	27	10	No	0.80	0.08	0.09	.38

Figure 4. Best Fitting Model for Wave I Offending - Total Antisocial Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p< .10. Standardized Coefficients are reported.
Model Statistics: X^2=32.64; df = 23; CFI = 0.90; RMSEA = 0.06; SRMR = 0.08; r^2 = .41.

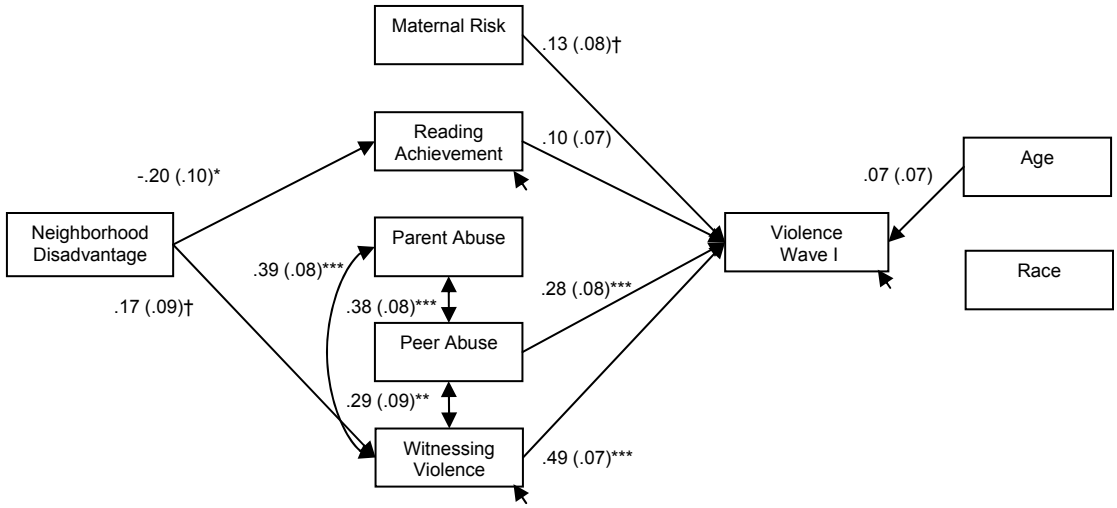
Violent Behavior. The baseline model for violent behavior also yielded adequate fit statistics and accounted for 42% of the variance (see Table 13). A similar pattern emerged with violent behavior as was present with total antisocial behavior. Removing either peer physical abuse (Model 10) or witnessing violence (Model 11) led to significant misfit. In this case, peer physical abuse accounted for less of the variance (4% compared to 10% from total behavior) whereas witnessing violence accounted for slightly more of the variance (17% compared to 14% from total behavior). Based on fit indices and variance explained, Model 18 was the most optimal model (see Figure 5). Removing either the age (Model 19) or reading achievement (Model 20) parameters from the final model would have been reasonable with this outcome. Similar to the model for total antisocial behavior, witnessing violence was more strongly associated with violent behavior than peer abuse.

Delinquent Behavior. The model for delinquent behavior demonstrated a similar pattern to that of violent behavior but explained less of the variance in delinquent behavior (42% to 27%; see table 14). Reading achievement accounted for 2% of the variance (Model 8). Unexpectedly, higher scores of reading achievement were related to more, rather than less, delinquent behaviors. Again, peer abuse (Model 10) and witnessing violence (Model 11) were significantly associated with delinquent behavior. However, their relative contributions were reversed as compared to that of violent behavior. That is, peer physical abuse (10%) accounted for a greater portion of the variance than witnessing violence (4%) – both remained significant (see Figure 6).

Table 13. Fit Statistics for Wave I Offending – Violent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	30.77		17			0.86	0.08	0.07	.42
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	30.89	0.12	18	1	No	0.87	0.08	0.08	.42
Model 3. Reading Achievement	**34.54**	**3.77**	**18**	**1**	**No**	**0.83**	**0.09**	**0.08**	**.42**
Model 4. Parental Abuse	31.08	0.31	18	1	No	0.87	0.08	0.08	.42
Model 5. Peer Abuse	30.84	0.07	18	1	No	0.87	0.08	0.07	.42
Model 6. Witnessing Violence	32.72	1.95	18	1	No	0.85	0.08	0.08	.43
Predictors to Wave I Offending - Violence									
Model 7. Maternal Risk	33.67	2.90	18	1	No	0.84	0.08	0.08	.42
Model 8. Reading Achievement	32.16	1.39	18	1	No	0.86	0.08	0.08	.41
Model 9. Parental Abuse	30.93	0.16	18	1	No	0.87	0.08	0.07	.42
Model 10. Peer Abuse	**40.89**	**10.12**	**18**	**1**	**Yes**	**0.77**	**0.10**	**0.08**	**.38**
Model 11. Witnessing Violence	**57.40**	**26.63**	**18**	**1**	**Yes**	**0.60**	**0.13**	**0.09**	**.25**
Model 12. Neighborhood Disadvantage	30.84	0.07	18	1	No	0.87	0.08	0.07	.42
Model 13. Age	31.85	1.08	18	1	No	0.86	0.08	0.07	.40
Model 14. Race (0 = White; 1 = Black)	30.82	0.05	18	1	No	0.87	0.08	0.07	.42
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	46.90	16.13	18	1	Yes	0.71	0.12	0.09	.39
Model 16.Parent Abuse with Witnessing Violence	47.25	16.48	18	1	Yes	0.70	0.12	0.10	.39
Model 17.Peer Abuse with Witnessing Violence	39.92	9.15	18	1	Yes	0.78	0.10	0.09	.37
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 9, 12, and 14	**31.62**	**0.85**	**23**	**6**	**No**	**0.91**	**0.06**	**0.08**	**.42**
Model 19. Model 18 plus 13	32.67	1.90	24	7	No	0.91	0.05	0.07	.40
Model 20. Model 18 plus 8	33.44	2.67	24	7	No	0.90	0.06	0.08	.41
Model 21. Model 18 plus 6, 7, 8, and 13	40.86	10.09	27	10	No	0.86	0.07	0.08	.40

Figure 5. Best Fitting Model for Wave I Offending - Violent Behavior

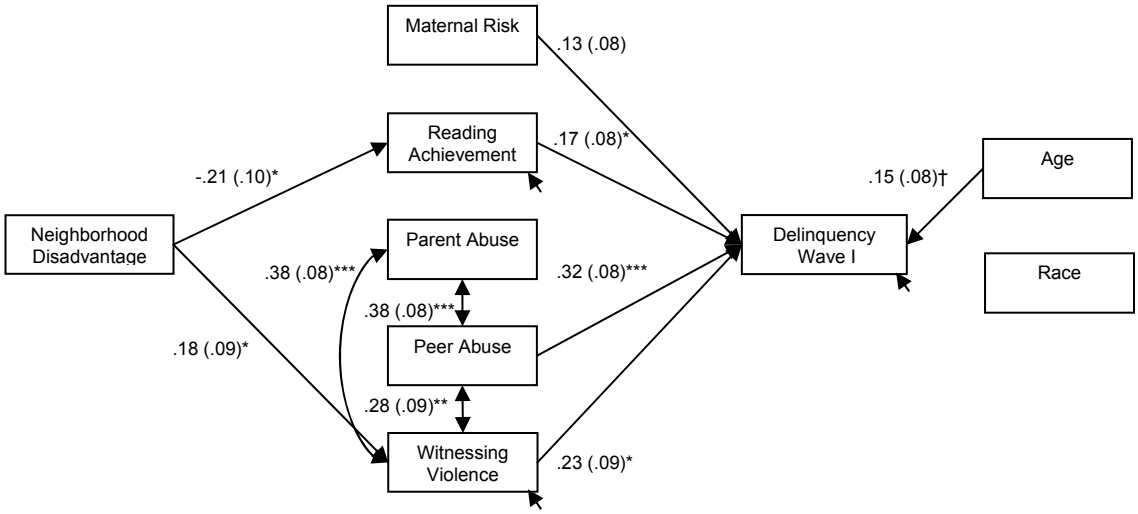


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=31.62; df = 23; CFI = 0.91; RMSEA = 0.06; SRMR = 0.08; r^2 = .42.

Table 14. Fit Statistics for Wave I Offending – Delinquent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	30.93		17			0.82	.08	.07	.28
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	31.05	0.12	18	1	No	0.83	0.08	0.07	.28
Model 3. Reading Achievement	**35.10**	**4.17**	**18**	**1**	**Yes**	**0.78**	**0.09**	**0.08**	**.28**
Model 4. Parental Abuse	31.23	0.30	18	1	No	0.83	0.08	0.08	.28
Model 5. Peer Abuse	31.02	0.09	18	1	No	0.83	0.08	0.07	.28
Model 6. Witnessing Violence	33.16	2.23	18	1	No	0.80	0.08	0.08	.29
Predictors to Wave I Offending - Delinquency									
Model 7. Maternal Risk	33.25	2.32	18	1	No	0.80	0.08	0.08	.28
Model 8. Reading Achievement	34.02	3.09	18	1	No	0.79	0.09	0.07	.26
Model 9. Parental Abuse	32.07	1.14	18	1	No	0.82	0.08	0.07	.27
Model 10. Peer Abuse	**46.18**	**15.25**	**18**	**1**	**Yes**	**0.63**	**0.11**	**0.08**	**.18**
Model 11. Witnessing Violence	**37.22**	**6.29**	**18**	**1**	**Yes**	**0.75**	**0.09**	**0.08**	**.24**
Model 12. Neighborhood Disadvantage	30.99	0.06	18	1	No	0.83	0.08	0.07	.28
Model 13. Age	33.19	2.26	18	1	No	0.80	0.08	0.07	.26
Model 14. Race (0 = White; 1 = Black)	33.15	2.22	18	1	No	0.80	0.08	0.07	.27
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	47.14	16.21	18	1	Yes	0.62	0.12	0.09	.28
Model 16.Parent Abuse with Witnessing Violence	47.31	16.38	18	1	Yes	0.62	0.12	0.09	.27
Model 17.Peer Abuse with Witnessing Violence	40.21	9.28	18	1	Yes	0.71	0.10	0.08	.25
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 9, and 12	32.60	1.67	22	4	No	0.86	0.06	0.07	.27
Model 19. Model 18 plus 14	**34.60**	**3.67**	**23**	**5**	**No**	**0.85**	**0.06**	**0.08**	**.27**
Model 20. Model 18 plus 6 and 14	38.35	7.42	24	6	No	0.81	0.07	0.08	.27
Model 21. Model 18 plus 6, 7, 8, 13, and 14	49.20	18.27	27	10	No	0.71	0.08	0.09	.19

Figure 6. Best Fitting Model for Wave I Offending – Delinquent Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=34.60; df = 23; CFI = 0.85; RMSEA = 0.06; SRMR = 0.08; r^2 = .27.

Wave I Antisocial Behavior- Race Specific Models.

The next set of analyses examined whether the pathways observed among the combined sample were similar for Black and White girls. The same three sets of nested models were evaluated: 1) total antisocial behavior; 2) violent behavior; and 3) delinquent behavior. However, in this case, the parameters were constrained to be equal for Black and White girls rather than being set to zero. A significant misfit would suggest that these pathways are indeed different for the two groups. Individual parameter testing and the knowledge gained from the combined sample analyses informed the models in the race specific analyses. All figures are presented with standardized coefficients and may vary slightly even when pathways are equalized since coefficients are group dependent.

Total Antisocial Behavior. In the baseline model, all pathways were allowed to be estimated for both groups – no parameter is equalized (see Table 15). The baseline model yielded adequate fit indices and explained a greater portion of the variance for White girls (52%) compared to Black girls (35%). The correlation between parental abuse and witnessing violence significantly differed for the two groups (Model 15). Parental abuse and witnessing violence were much more likely to co-occur for White girls as compared to the Black girls – both associations were in the positive direction. When all other pathways to antisocial behavior are constrained, equalizing the pathway between witnessing violence and antisocial behavior resulted in approximately a 4 point increase in the chi square value ($p < .05$) and reduced the variance explained for White girls by about 10% (Model 17 to 18). Model 19 set all the pathways to be equal for the two groups which resulted in approximately the same fit indices and variance explained as the combined model. This model explained more variance for Black girls than the baseline model (35% to 41%) but the variance explained for White girls was reduced by 10% (52% to 42%). Model 20 (see Figure 7) was the best fitting model; this is the same

model as the one from the combined analyses with two exceptions: 1) parental abuse with witnessing violence and 2) witnessing violence to antisocial behavior were allowed to differ by race. This model yielded excellent fit statistics and explained half the variance for White girls and a third of the variance in antisocial behavior for Black girls[7]. Further, peer abuse and witnessing violence explained an equivalent amount of the variance in Black girls' total antisocial behavior. The greater variance explained for the White girls stemmed from the relationship between witnessing violence and antisocial behavior. Finally, age was positively related to antisocial behavior – older girls were endorsed more antisocial behaviors.

Violent Behavior. Results from the race specific analyses for violent behavior were similar to that of total antisocial behavior as illustrated by Table 16. Again, when all pathways to violent behavior were constrained, equalizing the association between witnessing violence and antisocial behavior resulted in approximately a 4 point increase in the chi square ($p < .05$) value and reduced the variance explained for White girls by about 10% (Model 17 to 18). Model 19 equalized all the pathways and indicated that the gain in variance explained for Black girls is counteracted with about an equivalent loss in variance explained for White girls. Model 20 (see Figure 8) yielded excellent fit statistics and explained half the variance in violent behaviors for White girls and a third of the variance for Black girls. Peer abuse and witnessing violence were predictive of violent behaviors for both groups. Again, witnessing violence was a stronger predictor of violent behaviors for White girls than for Black girls.

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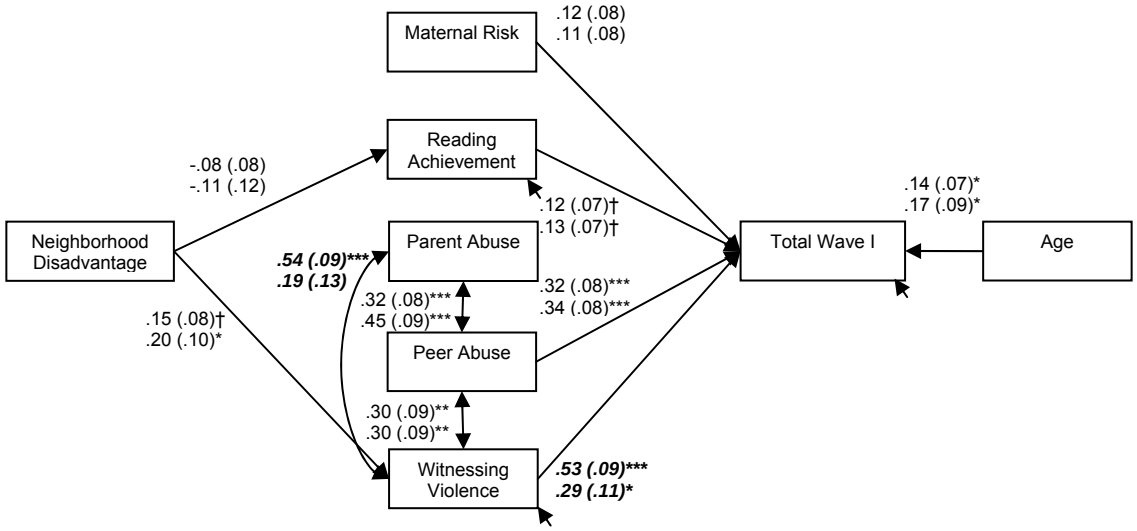
[7] The difference in the significance levels for neighborhood disadvantage and witnessing violence occurred given that race specific standardized coefficients are being reported (both p level are similar; with the one for Black girls being slightly lower).

Table 15. Fit Statistics for Race Specific Analyses Wave I Offending - Total Antisocial Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	34.13		24			0.89	0.08	0.09	.52	.35
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	35.32	1.19	25	1	No	0.89	0.08	0.09	.52	.35
Model 3. Reading Achievement	34.29	0.16	25	1	No	0.90	0.08	0.09	.52	.35
Model 4. Parental Abuse	35.27	1.14	25	1	No	0.89	0.08	0.09	.52	.35
Model 5. Peer Abuse	34.18	0.05	25	1	No	0.90	0.08	0.09	.52	.35
Model 6. Witnessing Violence	34.84	0.17	25	1	No	0.89	0.08	0.09	.52	.35
Predictors to Wave I Offending - Total										
Model 7. Maternal Risk	35.31	1.18	25	1	No	0.89	0.08	0.09	.51	.34
Model 8. Reading Achievement	34.20	0.07	25	1	No	0.90	0.08	0.09	.53	.35
Model 9. Parental Abuse	34.36	0.23	25	1	No	0.90	0.08	0.09	.52	.35
Model 10. Peer Abuse	34.23	0.10	25	1	No	0.90	0.08	0.09	.52	.36
Model 11. Witnessing Violence	37.29	3.16	25	1	No	0.86	0.09	0.09	.45	.40
Model 12. Neighborhood Disadvantage	34.15	0.02	25	1	No	0.90	0.08	0.09	.52	.35
Model 13. Age	34.90	0.77	25	1	No	0.89	0.08	0.09	.54	.34
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	34.25	0.12	25	1	No	0.90	0.08	0.09	.52	.35
Model 15.Parent Abuse with Witnessing Violence	**39.06**	**4.93**	**25**	**1**	**Yes**	**0.84**	**0.10**	**0.10**	**.50**	**.38**
Model 16.Peer Abuse with Witnessing Violence	34.13	0.00	25	1	No	0.90	0.08	0.09	.52	.35
Combining Models for Parsimony										
Model 17: All equal but 11 and 15	39.78	5.65	37	13	No	0.97	0.04	0.10	.53	.31
Model 18: All equal but 15	44.15	10.02	38	14	No	0.93	0.05	0.10	.42	.40
Model 19: All equal	50.26	16.13	39	15	No	0.89	0.07	0.11	.42	.41
Model 20: Model 17 plus 2@0, 4-5@0 9@0, 12@0	**41.36**	**7.23**	**42**	**18**	**No**	**1.00**	**0.00**	**0.10**	**.52**	**.32**

Figure 7. Best Fitting Model for Race Specific Analyses Wave I Offending - Total Antisocial Behavior

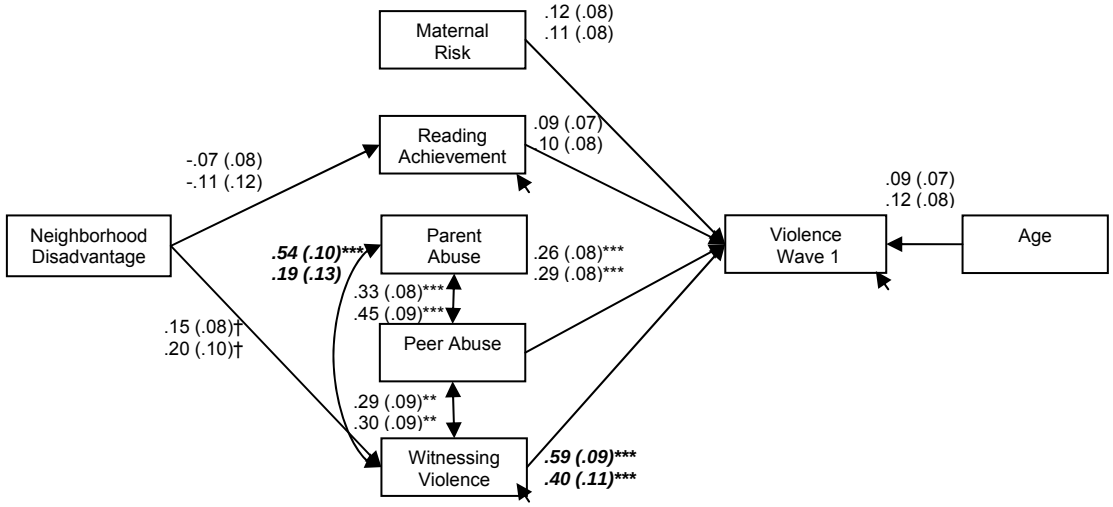


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=41.36; df = 42: CFI = 1.00: RMSEA = 0.00: SRMR = 0.10: $r^{2\,\text{White}}$ = .52: $r^{2\,\text{Black}}$ = .32.

Table 16. Fit Statistics for Race Specific Analyses Wave I Offending – Violent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	33.49		24			0.90	0.08	0.09	.53	.35
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	34.71	1.22	25	1	No	0.89	0.08	0.09	.53	.35
Model 3. Reading Achievement	33.65	0.16	25	1	No	0.90	0.08	0.09	.53	.35
Model 4. Parental Abuse	34.59	1.10	25	1	No	0.89	0.08	0.09	.53	.35
Model 5. Peer Abuse	33.57	0.08	25	1	No	0.91	0.08	0.09	.53	.35
Model 6. Witnessing Violence	34.21	0.72	25	1	No	0.90	0.08	0.09	.53	.35
Predictors to Wave I Offending - Violence										
Model 7. Maternal Risk	33.70	0.21	25	1	No	0.90	0.08	0.09	.53	.34
Model 8. Reading Achievement	34.42	0.93	25	1	No	0.90	0.08	0.09	.54	.34
Model 9. Parental Abuse	34.05	0.56	25	1	No	0.90	0.08	0.09	.53	.34
Model 10. Peer Abuse	33.68	0.19	25	1	No	0.90	0.08	0.09	.53	.35
Model 11. Witnessing Violence	36.26	2.77	25	1	No	0.88	0.09	0.09	.45	.40
Model 12. Neighborhood Disadvantage	33.50	0.01	25	1	No	0.91	0.08	0.09	.53	.35
Model 13. Age	33.50	0.01	25	1	No	0.91	0.08	0.09	.54	.35
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	33.61	0.12	25	1	No	0.91	0.08	0.09	.53	.35
Model 15.Parent Abuse with Witnessing Violence	**38.57**	**5.08**	**25**	**1**	**Yes**	**0.85**	**0.09**	**0.10**	**.50**	**.39**
Model 16.Peer Abuse with Witnessing Violence	33.50	0.01	25	1	No	0.91	0.08	0.09	.54	.35
Combining Models for Parsimony										
Model 17. All equal but 11 and 15	38.51	5.02	37	13	No	0.98	0.03	0.10	.53	.33
Model 18. All equal but 15	41.41	7.92	38	14	No	0.96	0.04	0.10	.44	.41
Model 19. All equal	47.79	14.30	39	15	No	0.90	0.06	0.11	.42	.43
Model 20. Model 17 plus 2@0, 4-5@0, 9@0, 12@0	**39.52**	**6.03**	**42**	**18**	**No**	**1.00**	**0.00**	**0.10**	**.53**	**.33**

Figure 8. Best Fitting Model for Race Specific Analyses Wave I Offending – Violent Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=39.52; df = 42; CFI = 1.00; RMSEA = 0.00; SRMR = 0.10; $r^{2\,\text{White}}$ = .53; $r^{2\,\text{Black}}$ = .33.

Delinquent Behavior. Similar to the combined analyses, the race specific models for delinquent behavior accounted for less variance than violent behavior for both White (50% to 36%) and Black (35% to 21%) girls. When all pathways to delinquent behavior are constrained for the two groups, equalizing the pathway between witnessing violence and antisocial behavior resulted in a 3.5 point increase in the chi square ($p = .05$) value and reduced the variance explained for White girls by about 10% (Model 17 to 18). This pathway was allowed to vary in Model 20 (Figure 9). Peer abuse and witnessing violence had almost an equivalent association with delinquent behaviors for White girls. In contrast, only peer abuse was predictive of delinquent behaviors for Black girls; witnessing violence was not significant.

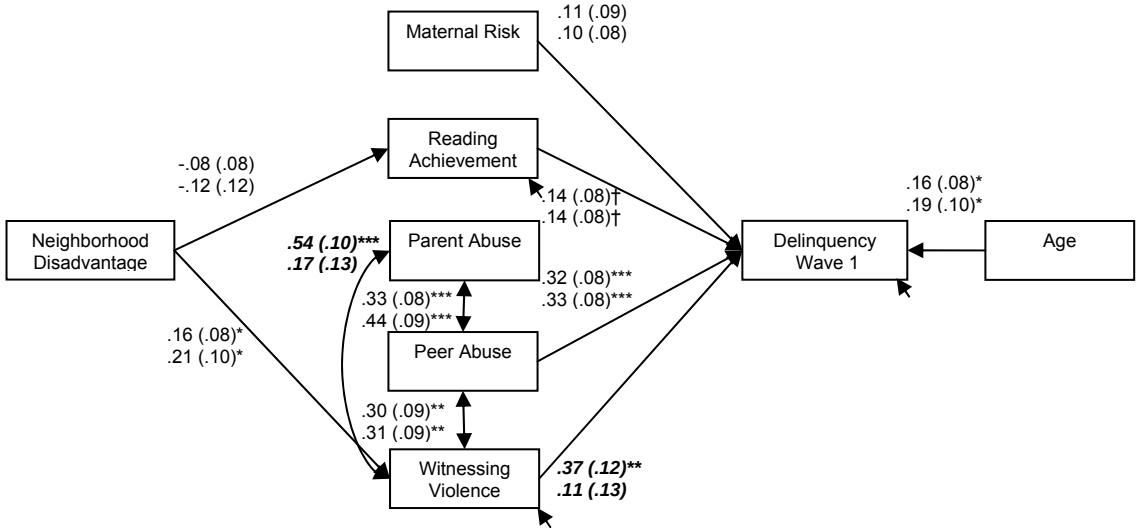
Summary of Wave I Antisocial Behavior.

In summary, neighborhood disadvantage was associated with lower scores on reading achievement and higher rates of witnessing violence for both Black and White girls. Further, peer abuse and witnessing violence were associated with total, violent, and delinquent behaviors. The relative influence varied by type of antisocial behavior. Specifically, witnessing violence was more strongly related to violent behavior than peer abuse for both groups; with an indication that the relationship may be slightly stronger for White girls. For delinquent behavior, witnessing violence and peer abuse were both equally predictive for White girls while only peer abuse was significant for Black girls. Reading achievement and age were also positively related to delinquent behavior.

Table 17. Fit Statistics for Race Specific Analyses Wave I Offending – Delinquent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	34.39		24			0.85	0.08	0.09	.37	.26
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	35.57	1.18	25	1	No	0.85	0.08	0.09	.37	.26
Model 3. Reading Achievement	34.50	0.11	25	1	No	0.86	0.08	0.09	.37	.26
Model 4. Parental Abuse	35.50	1.11	25	1	No	0.85	0.08	0.09	.37	.26
Model 5. Peer Abuse	34.43	0.04	25	1	No	0.86	0.08	0.09	.37	.26
Model 6. Witnessing Violence	35.08	0.69	25	1	No	0.86	0.08	0.09	.37	.26
Predictors to Wave I Offending - Delinquency										
Model 7. Maternal Risk	35.89	1.50	25	1	No	0.85	0.09	0.09	.35	.24
Model 8. Reading Achievement	34.65	0.26	25	1	No	0.86	0.08	0.09	.35	.27
Model 9. Parental Abuse	34.42	0.03	25	1	No	0.87	0.08	0.09	.37	.26
Model 10. Peer Abuse	34.43	0.04	25	1	No	0.87	0.08	0.09	.36	.27
Model 11. Witnessing Violence	36.40	2.01	25	1	No	0.84	0.09	0.09	.32	.29
Model 12. Neighborhood Disadvantage	34.39	0.00	25	1	No	0.87	0.08	0.09	.37	.26
Model 13. Age	36.07	1.68	25	1	No	0.84	0.09	0.09	.39	.24
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	34.47	0.01	25	1	No	0.87	0.08	0.09	.36	.26
Model 15.Parent Abuse with Witnessing Violence	**39.34**	**4.95**	**25**	**1**	**Yes**	**0.80**	**0.10**	**0.10**	**.36**	**.27**
Model 16.Peer Abuse with Witnessing Violence	34.40	0.01	25	1	No	0.87	0.08	0.09	.37	.26
Combining Models for Parsimony										
Model 17. All equal but 11 and 15	41.23	6.84	37	13	No	0.94	0.04	0.10	.37	.21
Model 18. All equal but 15	45.03	10.64	38	14	No	0.90	0.06	0.10	.27	.26
Model 19. All equal	51.43	17.04	39	15	No	0.82	0.07	0.11	.28	.26
Model 20. Model 17 plus 2@0, 4- 5@0, 9@0, 12@0	**44.27**	**9.88**	**42**	**18**	**No**	**0.97**	**0.03**	**0.10**	**.36**	**.21**

Figure 9. Best Fitting Model for Race Specific Analyses for Wave I Offending – Delinquent Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=44.27: df = 42: CFI = 0.97: RMSEA = 0.03: SRMR = 0.10: $r^{2\ White}$ = .36: $r^{2\ Black}$ = .21.

Results IV. Wave II Antisocial Behavior.

Three sets of nested models were evaluated to determine the simultaneous direct and indirect impact of neighborhood disadvantage and violence exposure on 1) total antisocial behavior; 2) violent behavior; and 3) delinquent behavior. Two changes were made to these models - time at risk was added and age at Wave II interview (rather than Wave I) was used. The relationship between neighborhood disadvantage and the other predictors generally remained consistent throughout these analyses and will not be commented on in the subsequent sections.

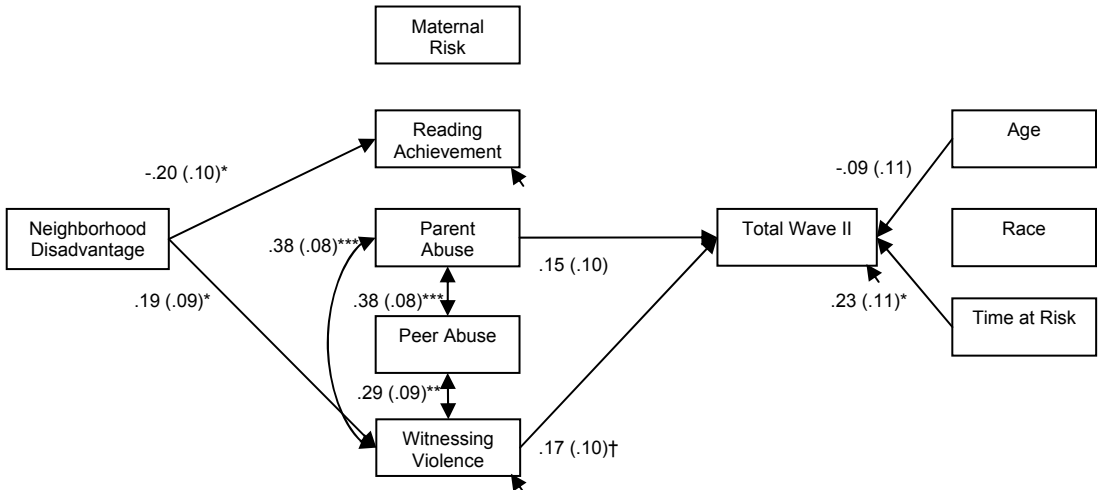
Total Antisocial Behavior. The baseline model for Wave II antisocial behavior demonstrated acceptable RMSEA and SRMR but the CFI was lower than the cutoff (see Table 18). The model explained a smaller proportion of the variance in Wave II antisocial behavior compared to Wave I antisocial behavior (14% to 41%). Removing the influence of time at risk led to significant misfit (Model 15). Model 20 was the best fitting model (see Figure 10); it retained parental abuse, witnessing violence, age at Wave II, and time at risk given that removing the influence of these variables worsened model fit. This model indicated acceptable fit indices and indicated that the longer a girl had been released, the more likely she was to engage in antisocial behavior.

Violent Behavior. The baseline model for violent behavior had acceptable RMSEA and SRMR but again the CFI was lower than the cutoff (Table 19). With regard to Wave II violent behavior, removing the influence of age rather than time at risk resulted in a significant misfit (Model 13). Model 19 was the most optimal model – peer abuse, parental abuse, and time at risk were kept in this model since removing them would worsen model fit. This model suggests that as these girls get older, they are less likely to report engaging in violent behavior (Figure 11).

Table 18. Fit Statistics for Wave II Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	34.92		22			0.76	0.07	0.07	.14
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	35.05	0.13	23	1	No	0.78	0.07	0.07	.14
Model 3. Reading Achievement	**38.69**	**3.77**	**23**	**1**	**Yes**	**0.71**	**0.08**	**0.07**	**.15**
Model 4. Parental Abuse	35.24	0.32	23	1	No	0.77	0.07	0.07	.14
Model 5. Peer Abuse	34.97	0.05	23	1	No	0.79	0.07	0.07	.14
Model 6. Witnessing Violence	37.55	2.63	23	1	No	0.73	0.07	0.07	.15
Predictors to Wave II Offending - Total									
Model 7. Maternal Risk	35.95	1.03	23	1	No	0.76	0.07	0.07	.14
Model 8. Reading Achievement	35.16	0.24	23	1	No	0.77	0.07	0.07	.14
Model 9. Parental Abuse	35.97	1.05	23	1	No	0.76	0.07	0.07	.14
Model 10. Peer Abuse	35.15	0.23	23	1	No	0.78	0.07	0.07	.14
Model 11. Witnessing Violence	37.17	2.25	23	1	No	0.74	0.07	0.07	.13
Model 12. Neighborhood Disadvantage	35.51	0.59	23	1	No	0.77	0.07	0.07	.14
Model 13. Age	36.29	1.37	23	1	No	0.75	0.07	0.07	.14
Model 14. Race (0 = White; 1 = Black)	34.95	0.03	23	1	No	0.78	0.07	0.07	.14
Model 15. Time at Risk	**41.09**	**6.17**	**23**	**1**	**Yes**	**0.67**	**0.08**	**0.07**	**.10**
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	51.28	16.36	23	1	Yes	0.48	0.10	0.08	.14
Model 17.Parent Abuse with Witnessing Violence	50.92	16.00	23	1	Yes	0.48	0.10	0.08	.13
Model 18.Peer Abuse with Witnessing Violence	44.29	9.37	23	1	Yes	0.61	0.09	0.08	.14
Combining Models for Parsimony									
Model 19. Models 2, 4, 5, 8, 10, 12 and 14	36.55	1.63	29	7	No	0.86	0.05	0.07	.13
Model 20. Model 19 plus 7	**37.62**	**2.70**	**30**	**8**	**No**	**0.86**	**0.05**	**0.07**	**.12**
Model 21. Model 19 plus 7, 9, and 13	40.85	5.93	32	10	No	0.84	0.05	0.07	.11

Figure 10. Best Fitting Model for Wave II Offending - Total Antisocial Behavior

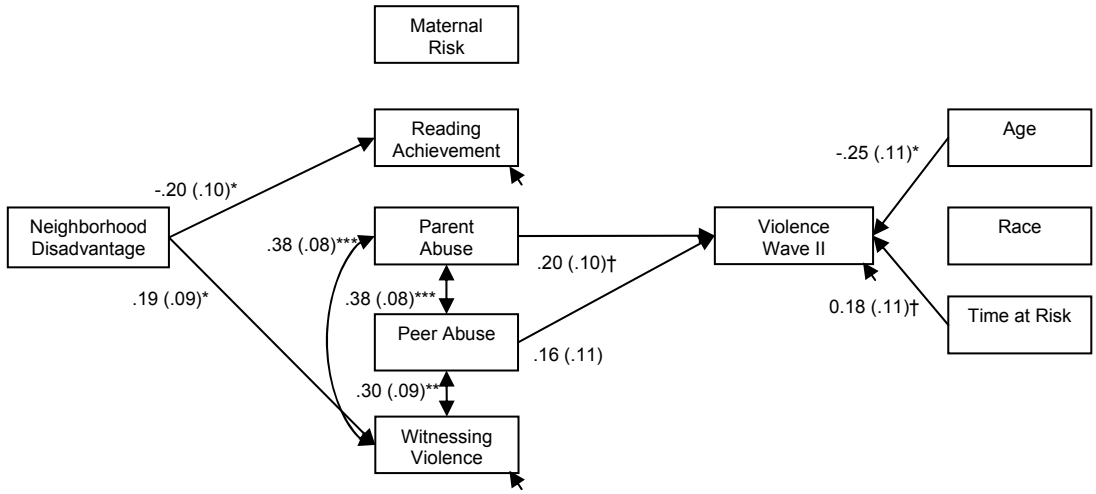


Note. *** p <.001. ** p <.01. * p <.05. † p <.10. Standardized coefficients are reported.
Model Statistics: X^2=37.62; df = 30; CFI = 0.86; RMSEA = 0.05; SRMR = 0.07; r^2 = .12.

Table 19. Fit Statistics for Wave II Offending – Violent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	35.26		22			0.77	0.07	0.07	.16
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	35.39	0.13	23	1	No	0.79	0.07	0.07	.16
Model 3. Reading Achievement	38.69	3.43	23	1	No	0.73	0.08	0.07	.17
Model 4. Parental Abuse	35.59	0.33	23	1	No	0.78	0.07	0.07	.16
Model 5. Peer Abuse	35.32	0.06	23	1	No	0.79	0.07	0.07	.16
Model 6. Witnessing Violence	37.86	2.60	23	1	No	0.75	0.07	0.07	.17
Predictors to Wave II Offending - Violence									
Model 7. Maternal Risk	35.28	0.02	23	1	No	0.70	0.07	0.07	.16
Model 8. Reading Achievement	35.37	0.11	23	1	No	0.79	0.07	0.07	.16
Model 9. Parental Abuse	37.63	2.37	23	1	No	0.75	0.07	0.07	.15
Model 10. Peer Abuse	36.74	1.38	23	1	No	0.76	0.07	0.07	.14
Model 11. Witnessing Violence	36.60	1.34	23	1	No	0.77	0.07	0.07	.16
Model 12. Neighborhood Disadvantage	35.74	0.48	23	1	No	0.78	0.07	0.07	.16
Model 13. Age	**39.48**	**4.22**	**23**	**1**	**Yes**	**0.72**	**0.08**	**0.07**	**.15**
Model 14. Race (0 = White; 1 = Black)	35.30	0.04	23	1	No	0.79	0.07	0.07	.16
Model 15. Time at Risk	38.04	2.78	23	1	No	0.74	0.07	0.07	.15
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	51.55	16.29	23	1	Yes	0.51	0.10	0.09	.14
Model 17.Parent Abuse with Witnessing Violence	51.20	15.94	23	1	Yes	0.52	0.10	0.09	.14
Model 18.Peer Abuse with Witnessing Violence	44.72	9.46	23	1	Yes	0.63	0.09	0.08	.15
Combining Models for Parsimony									
Model19. Models 2, 4, 5, 7, 8, 11, 12 and 14	**37.49**	**2.23**	**30**	**8**	**No**	**0.87**	**0.05**	**0.07**	**.15**
Model 20. Models 19 plus 10	39.79	4.53	31	9	No	0.85	0.05	0.07	.13

Figure 11. Best Fitting for Wave II Offending – Violent Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=37.49; df = 30; CFI = 0.87; RMSEA = 0.05; SRMR = 0.07; r^2 = .15.

Delinquent Behavior. The baseline model for Wave II delinquent behavior resulted in similar fit statistics to the other Wave II models and accounted for about a fifth of the variance (see Table 20). Setting either the witnessing violence (Model 11) or time at risk (Model 15) pathways to zero resulted in significant misfit. However, age, maternal risk, and reading achievement were also retained in the best fitting model (Model 19) since removing them would worsen the fit indices. As Figure 12 illustrates, both witnessing violence and time at risk were significantly associated with Wave II delinquent behavior; with the relationship being stronger for time at risk.

Wave II Antisocial Behavior – Race Specific Models.

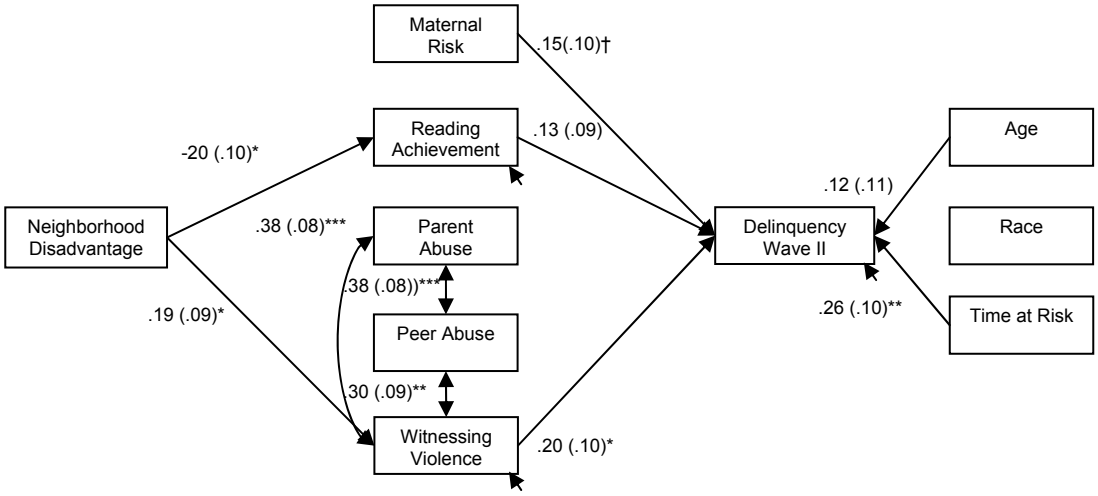
Similar to Wave I antisocial behavior, the next set of analyses aimed to determine whether the pathways between these variables differ by race. Information attained at the combined level was used to inform optimal models at this step.

Total Antisocial Behavior. The baseline model for total antisocial behavior demonstrated fair fit statistics and explained about 20% of the variance for both groups (see Table 21). Equalizing all the parameters to Wave II antisocial behavior did not lead to significant misfit but resulted in a 7% loss of variance for White girls (Model 19). Allowing four pathways to differ resulted in excellent fit statistics: 1) parenting abuse and antisocial behavior; 2) witnessing violence and antisocial behavior; 3) time at risk and antisocial behavior and 4) parental abuse with witnessing violence. Model 22 (see Figure 13) was the best fitting model and is the same model presented in the combined analyses with two exceptions: 1) the pathway between neighborhood disadvantage and reading achievement was removed and 2) the pathway between maternal risk and antisocial behavior was added. Witnessing violence was related to Wave II antisocial behavior for Black girls whereas time at risk was associated with Wave II antisocial behavior for White girls.

Table 20. Fit Statistics for Wave II Offending – Delinquent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	34.88		22			0.77	0.07	0.07	.21
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	35.00	0.12	23	1	No	0.79	0.07	0.07	.21
Model 3. Reading Achievement	38.89	4.01	23	1	Yes	0.72	0.08	0.07	.21
Model 4. Parental Abuse	35.10	0.22	23	1	No	0.79	0.07	0.07	.21
Model 5. Peer Abuse	34.80	0.08	23	1	No	0.79	0.07	0.07	.21
Model 6. Witnessing Violence	37.84	2.96	23	1	No	0.73	0.07	0.07	.21
Predictors to Wave II Offending - Delinquency									
Model 7. Maternal Risk	37.02	2.14	23	1	No	0.75	0.07	0.07	.20
Model 8. Reading Achievement	36.68	1.80	23	1	No	0.76	0.07	0.07	.18
Model 9. Parental Abuse	34.99	0.11	23	1	No	0.79	0.07	0.07	.21
Model 10. Peer Abuse	34.93	0.05	23	1	No	0.79	0.07	0.07	.21
Model 11. Witnessing Violence	**38.98**	**4.10**	**23**	**1**	**Yes**	**0.72**	**0.08**	**0.07**	**.17**
Model 12. Neighborhood Disadvantage	36.19	1.31	23	1	No	0.77	0.07	0.07	.19
Model 13. Age	36.04	1.16	23	1	No	0.77	0.07	0.07	.19
Model 14. Race (0 = White; 1 = Black)	35.22	0.66	23	1	No	0.79	0.07	0.07	.20
Model 15. Time at Risk	**41.05**	**6.17**	**23**	**1**	**Yes**	**0.68**	**0.08**	**0.07**	**.16**
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	51.29	16.41	23	1	Yes	0.50	0.10	0.08	.21
Model 17.Parent Abuse with Witnessing Violence	50.87	15.99	23	1	Yes	0.51	0.10	0.08	.20
Model 18.Peer Abuse with Witnessing Violence	44.14	9.26	23	1	Yes	0.62	0.09	0.08	.21
Combining Models for Parsimony									
Model 19. Models 2, 4, 5, 9, 10, 13, and 14	**36.68**	**1.80**	**29**	**7**	**No**	**0.87**	**0.05**	**0.07**	**.18**
Model 20. Model 19 plus 12	38.02	3.14	30	8	No	0.86	0.05	0.07	.17
Model 21. Model 19 plus 12 minus 13	36.80	1.92	29	8	No	0.86	0.05	0.07	.19

Figure 12. Best Fitting Model for Wave II Offending – Delinquent Behavior

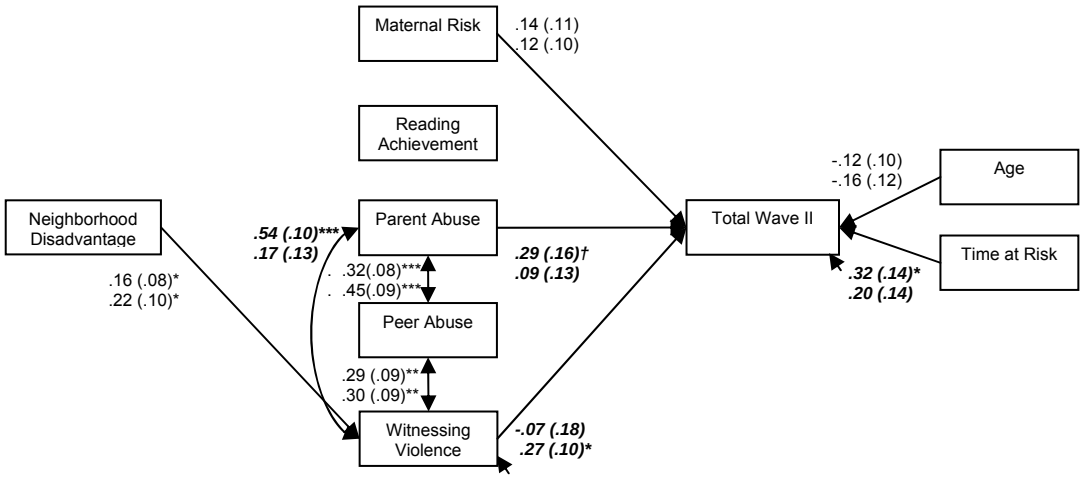


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=36.68; df = 29; CFI = 0.87; RMSEA = 0.05; SRMR = 0.07; r^2 = .18.

Table 21. Fit Statistics for Race Specific Analyses Wave II Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	42.99		34			0.81	0.07	0.09	.19	.19
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	44.40	1.41	35	1	No	0.80	0.07	0.09	.19	.19
Model 3. Reading Achievement	43.41	0.42	35	1	No	0.82	0.06	0.09	.19	.19
Model 4. Parental Abuse	44.09	1.10	35	1	No	0.81	0.07	0.09	.20	.19
Model 5. Peer Abuse	43.12	0.13	35	1	No	0.83	0.06	0.09	.19	.19
Model 6. Witnessing Violence	43.60	0.61	35	1	No	0.82	0.06	0.09	.20	.19
Predictors to Wave II Offending - Total										
Model 7. Maternal Risk	43.19	0.20	35	1	No	0.83	0.06	0.09	.20	.18
Model 8. Reading Achievement	43.18	0.19	35	1	No	0.83	0.06	0.09	.20	.18
Model 9. Parental Abuse	43.69	0.70	35	1	No	0.82	0.06	0.09	.17	.19
Model 10. Peer Abuse	43.26	0.27	35	1	No	0.82	0.06	0.09	.20	.17
Model 11. Witnessing Violence	44.41	1.42	35	1	No	0.80	0.07	0.09	.20	.16
Model 12. Neighborhood Disadvantage	43.70	0.71	35	1	No	0.82	0.06	0.09	.18	.19
Model 13. Age	43.28	0.29	35	1	No	0.82	0.06	0.09	.18	.19
Model 14: Time at Risk	43.54	0.55	35	1	No	0.82	0.06	0.09	.16	.20
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	43.01	0.02	35	1	No	0.83	0.06	0.09	.19	.19
Model 16.Parent Abuse with Witnessing Violence	**48.10**	**5.11**	**35**	**1**	**Yes**	**0.72**	**0.08**	**0.10**	**.19**	**.21**
Model 17.Peer Abuse with Witnessing Violence	43.01	0.02	35	1	No	0.83	0.06	0.09	.19	.19
Combining Models for Parsimony										
Model 18. All equal but 11 & 16	55.90	12.91	48	14	No	0.83	0.05	0.10	.12	.21
Model 19. All equal but 16	57.44	14.45	49	15	No	0.82	0.05	0.11	.14	.15
Model 20. All equal	57.71	14.72	50	16	No	0.84	0.05	0.11	.14	.15
Model 21. All equal but 9, 11, 14, and 16	47.76	4.77	46	12	No	0.96	0.03	0.09	.20	.17
Model 22. Model 21 plus 2 - 5@0, 8@0, 10@0, 12@0	**50.45**	**7.46**	**53**	**19**	**No**	**1.00**	**0.00**	**0.10**	**.18**	**.15**

Figure 13. Best Fitting Model for Race Specific Analyses for Wave II Offending – Total Antisocial Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=50.45; df = 53; CFI = 1.00; RMSEA = 0.00; SRMR = 0.10; $r^{2\,White}$ = .18; $r^{2\,Black}$ = .15.

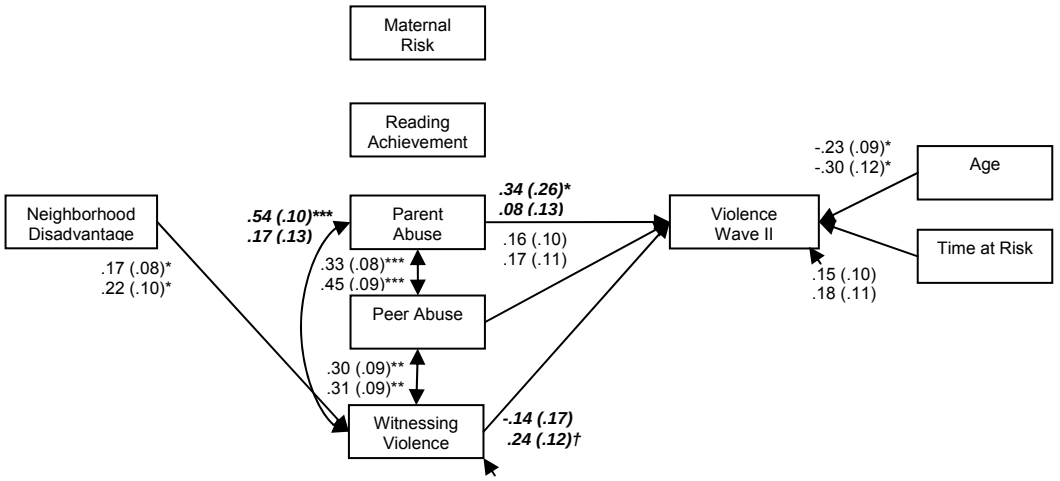
Violent Behavior. The baseline model for Wave II violent behavior had acceptable fit indices (see Table 22). Constraining all the individual parameters to violent behavior to be equal did not lead to significant misfit but led to more than a 7% loss in variance explained for both groups (Model 18). Allowing two pathways, 1) parental abuse to Wave II violent behavior and 2) witnessing violence to Wave II violent behavior, to vary by race resulted in better fit statistics and greater variance explained for both groups (Model 18 to Model 20). As Figure 14 illustrates, age was predictive of violent behavior for both groups and suggested that as these girls' age, they are less likely to engage in violent behaviors. Further, parental abuse was predictive of violent behaviors for White girls but not for Black girls.

Delinquent Behavior. The baseline model for delinquent behavior resulted in slightly better fit statistics than the two previous models (see Table 23). As with the other race specific analyses, the model that equalized all the parameters except the correlation between parental abuse and witnessing violence yielded excellent fit statistics (Model 18). However, it resulted in about a 10% drop in variance explained for White girls. Allowing three additional parameters- 1) witnessing violence to Wave II delinquent behavior, 2) age to Wave II delinquent behavior, and 3) time at risk to Wave II delinquent behavior, to vary by race resulted in better fit statistics and explained greater variance (Model 20). Model 21 (see Figure 15) indicated that maternal risk was associated with Wave II delinquent behavior for both groups. For Black girls, witnessing violence and age were associated with Wave II delinquent behaviors. Whereas, for White girls, time at risk was associated with Wave II delinquent behaviors.

Table 22. Fit Statistics for Race Specific Analyses Wave II Offending – Violent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	43.54		34			0.82	0.07	0.09	.22	.26
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	45.12	1.58	35	1	No	0.81	0.07	0.09	.22	.26
Model 3. Reading Achievement	43.88	0.34	35	1	No	0.84	0.06	0.09	.22	.26
Model 4. Parental Abuse	44.52	0.98	35	1	No	0.82	0.07	0.09	.23	.26
Model 5. Peer Abuse	43.63	0.09	35	1	No	0.84	0.06	0.09	.22	.26
Model 6. Witnessing Violence	44.07	0.53	35	1	No	0.83	0.07	0.09	.22	.26
Predictors to Wave II Offending - Violence										
Model 7. Maternal Risk	43.82	0.28	35	1	No	0.84	0.06	0.09	.21	.26
Model 8. Reading Achievement	44.18	0.64	35	1	No	0.83	0.07	0.09	.22	.25
Model 9. Parental Abuse	44.71	1.17	35	1	No	0.82	0.07	0.09	.17	.26
Model 10. Peer Abuse	43.85	0.31	35	1	No	0.84	0.06	0.09	.23	.24
Model 11. Witnessing Violence	44.29	0.75	35	1	No	0.83	0.07	0.09	.24	.25
Model 12. Neighborhood Disadvantage	44.87	1.33	35	1	No	0.82	0.07	0.09	.18	.19
Model 13. Age	44.09	0.55	35	1	No	0.83	0.07	0.09	.21	.24
Model 14: Time at Risk	43.76	0.22	35	1	No	0.84	0.06	0.09	.22	.26
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	43.55	0.01	35	1	No	0.84	0.06	0.09	.22	.26
Model 16.Parent Abuse with Witnessing Violence	**48.70**	**5.16**	**35**	**1**	**Yes**	**0.75**	**0.08**	**0.10**	**.20**	**.29**
Model 17.Peer Abuse with Witnessing Violence	43.56	0.02	35	1	No	0.84	0.06	0.09	.22	.26
Combining Models for Parsimony										
Model 18. All equal but 16	53.55	10.01	49	15	No	0.92	0.04	0.10	.15	.18
Model 19. All equal	60.58	17.04	50	16	No	0.81	0.06	0.11	.14	.19
Model 20. All equal but 9, 11, and 16	50.54	7.00	47	13	No	0.94	0.04	0.10	.18	.22
Model 21. Model 20 plus 2 – 5@0, 7- 8@0, 12@0	**52.27**	**8.73**	**54**	**20**	**No**	**1.00**	**0.00**	**0.10**	**.18**	**.22**

Figure 14. Best Fitting Model for Race Specific Analyses for Wave II Offending – Violent Behavior

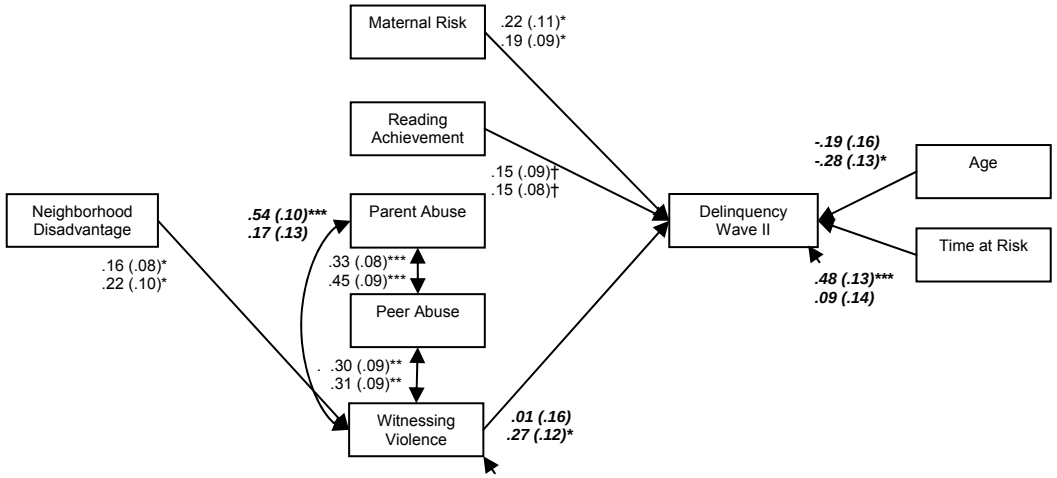


Note. *** p <.001. ** p <.01. * p <.05. †p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=52.27; df = 54; CFI = 1.00; RMSEA = 0.00; SRMR = 0.10; $r^{2\,White}$ = .18; $r^{2\,Black}$ = .22.

Table 23. Fit Statistics for Race Specific Analyses Wave II Offending – Delinquent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	42.86		34			0.83	0.07	0.09	.31	.23
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	44.03	1.17	35	1	No	0.83	0.07	0.09	.30	.24
Model 3. Reading Achievement	43.16	0.30	35	1	No	0.84	0.06	0.09	.31	.24
Model 4. Parental Abuse	44.00	1.14	35	1	No	0.83	0.07	0.09	.31	.24
Model 5. Peer Abuse	42.98	0.12	35	1	No	0.85	0.06	0.09	.31	.24
Model 6. Witnessing Violence	43.50	0.64	35	1	No	0.84	0.06	0.09	.31	.23
Predictors to Wave II Offending - Delinquency										
Model 7. Maternal Risk	42.86	0.00	35	1	No	0.85	0.06	0.09	.31	.23
Model 8. Reading Achievement	42.93	0.07	35	1	No	0.85	0.06	0.09	.29	.24
Model 9. Parental Abuse	43.14	0.28	35	1	No	0.84	0.06	0.09	.30	.24
Model 10. Peer Abuse	42.91	0.05	35	1	No	0.85	0.06	0.09	.31	.23
Model 11. Witnessing Violence	43.98	1.12	35	1	No	0.83	0.07	0.09	.31	.21
Model 12. Neighborhood Disadvantage	43.73	0.87	35	1	No	0.83	0.06	0.09	.29	.24
Model 13. Age	46.67	3.81	35	1	No	0.78	0.07	0.10	.30	.19
Model 14: Time at Risk	45.67	2.81	35	1	No	0.80	0.07	0.09	.19	.26
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	42.90	0.04	35	1	No	0.85	0.06	0.09	.31	.24
Model 16.Parent Abuse with Witnessing Violence	**47.89**	**5.03**	**35**	**1**	**Yes**	**0.75**	**0.08**	**0.10**	**.31**	**.24**
Model 17.Peer Abuse with Witnessing Violence	42.89	0.03	35	1	No	0.85	0.06	0.09	.31	.23
Combining Models for Parsimony										
Model 18. All equal but 16	53.05	10.19	49	15	No	0.92	0.04	0.10	.22	.20
Model 19. All equal	60.11	17.25	50	16	No	0.81	0.06	0.11	.21	.21
Model 20. All equal but 11, 13, 14, and 16	47.32	4.46	47	13	No	0.98	0.02	0.10	.27	.25
Model 21. Model 20 plus 2-5@0, 9-10@0; 12@0	**50.27**	**7.41**	**53**	**19**	**No**	**1.00**	**0.00**	**0.10**	**.26**	**.24**

Figure 15. Best Fitting Model for Race Specific Analyses for Wave II Offending – Delinquent Behavior



Note. *** p <.001. ** p <.01. * p <.05. † p <.10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=50.27; df = 53; CFI = 1.00; RMSEA = 0.00; SRMR = 0.10; $r^{2\,White}$ = .26; $r^{2\,Black}$ = .24.

Summary of Wave II Antisocial Behavior. Parental abuse, rather than peer abuse, was a predictor of Wave II violent behavior – the association was stronger for White girls than for Black girls. Interestingly, when examining the combined sample, an association between the two was not even detected suggesting the importance of looking at these pathways by race. Age and time at risk were consistently related to Wave II antisocial behavior. As these girls got older, they were less likely to engage in violent behaviors. Results further suggested that being older was associated with fewer delinquent behaviors for Black girls whereas time at risk was associated with more delinquent behaviors for White girls. Maternal risk was associated with delinquent behavior for both groups.

Results V. Recidivism.

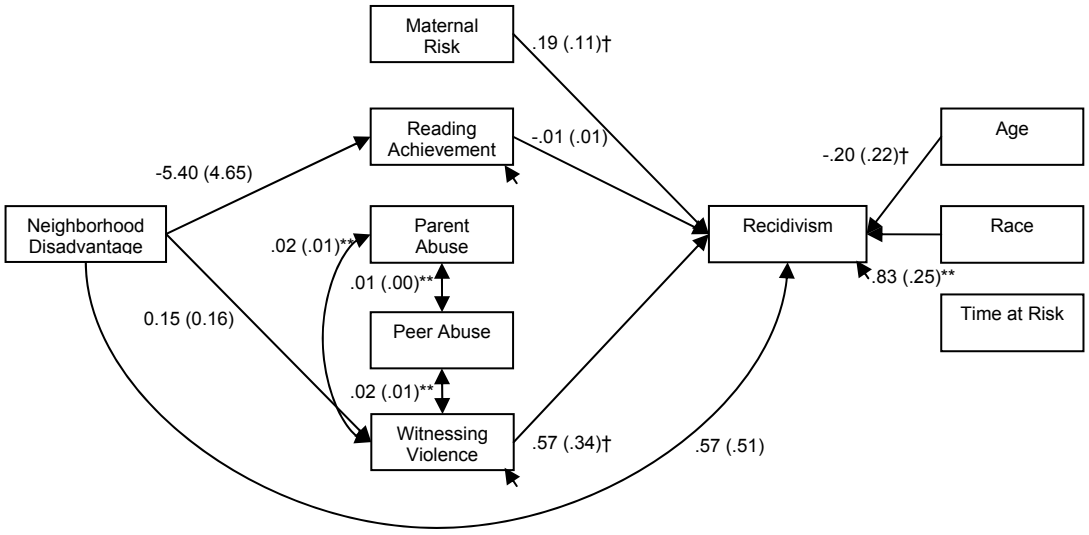
The final set of models determined the likelihood of recidivism. Three sets of nested models evaluated the simultaneous impact of neighborhood disadvantage and violence exposure on the likelihood of: 1) general recidivism; 2) violent recidivism; and 3) non-violent recidivism. All models used age at the time of last recidivism run and time at risk which was calculated as the time between release and the last recidivism run. All figures report raw estimates given that standardized coefficients based on categorical outcomes can pose interpretation problems (Cohen, Cohen, West, & Aiken, 2003).

General Recidivism. The baseline model for recidivism yielded adequate fit indices with the WRMR and RMSEA but the CFI was considerably lower (see Table 24). This model accounted for about a third of the variance in rearrest. Race was the only variable significantly related to rearrest and accounted for about 10% of the variance (Model 14). The pathways from maternal risk, reading achievement, witnessing violence, age, and neighborhood disadvantage to recidivism were retained in the final model since removing them would increase the WRMR and worsen the fit. Model 19 indicated that Black girls were more likely to get rearrested (see Figure 16).

Table 24. Fit Statistics for General Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	35.28		18			0.60	0.09	0.94	.31
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	35.71	0.01	19	1	No	0.61	0.09	0.94	.31
Model 3. Reading Achievement	36.48	1.18	19	1	No	0.59	0.09	0.95	.32
Model 4. Parental Abuse	36.19	0.71	19	1	No	0.60	0.09	0.95	.31
Model 5. Peer Abuse	36.02	0.40	19	1	No	0.60	0.09	0.95	.32
Model 6. Witnessing Violence	36.46	1.19	19	1	No	0.59	0.09	0.95	.32
Predictors to Recidivism									
Model 7. Maternal Risk	37.66	2.51	19	1	No	0.57	0.09	0.97	.28
Model 8. Reading Achievement	37.14	1.79	19	1	No	0.58	0.09	0.96	.30
Model 9. Parental Abuse	36.34	0.05	19	1	No	0.60	0.09	0.94	.32
Model 10. Peer Abuse	36.31	0.23	19	1	No	0.60	0.09	0.94	.31
Model 11. Witnessing Violence	37.80	2.95	19	1	No	0.56	0.09	0.96	.28
Model 12. Neighborhood Disadvantage	36.67	1.07	19	1	No	0.59	0.09	0.95	.31
Model 13. Age	38.05	3.06	19	1	No	0.56	0.10	0.97	.28
Model 14. Race (0 = White; 1 = Black)	**43.81**	**10.91**	**19**	**1**	**Yes**	**0.42**	**0.11**	**1.04**	**.20**
Model 15. Time at Risk	36.66	0.59	19	1	No	0.59	0.09	0.95	.32
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	43.90	11.40	19	1	Yes	0.42	0.11	1.04	.31
Model 17.Parent Abuse with Witnessing Violence	44.33	11.75	19	1	Yes	0.41	0.11	1.04	.32
Model 18.Peer Abuse with Witnessing Violence	42.49	9.19	19	1	Yes	0.45	0.11	1.03	.31
Combining Models for Parsimony									
Model 19. Models 2, 4-5, 9-10, & 15	**36.76**	**2.23**	**22**	**5**	**No**	**0.66**	**0.08**	**0.96**	**.31**
Model 20. Model 19 plus 12	38.11	3.30	23	6	No	0.65	0.08	0.98	.31

Figure 16. Best Fitting Model for General Recidivism



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=36.76; df = 22; CFI = 0.66; RMSEA = 0.08; WRMR = 0.96; r^2 = .31.

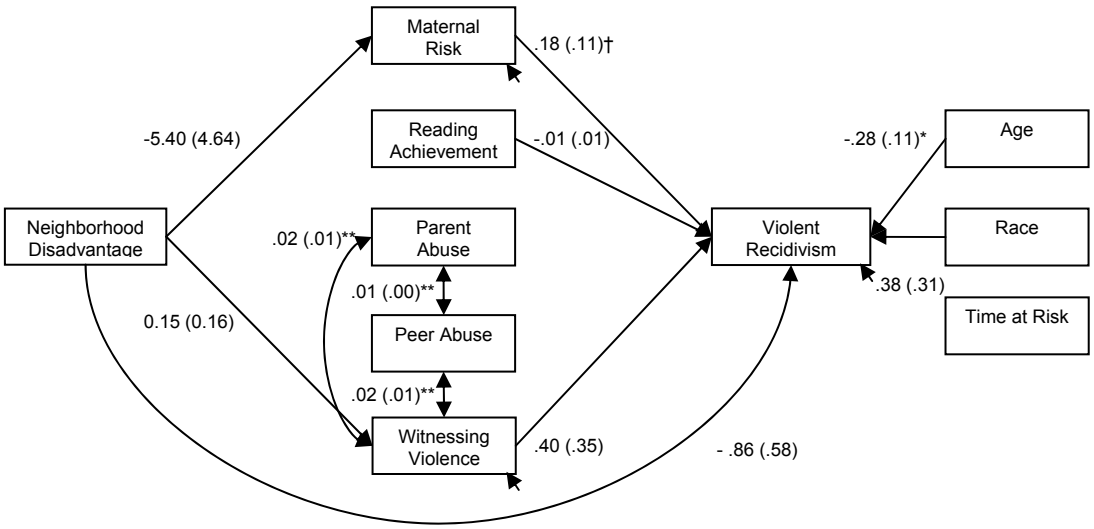
Violent Recidivism. The model fit for violent recidivism resulted in poor absolute fit statistics and accounted for 24% of the variance (see Table 25). Removing the influence of age led to significant misfit, it accounted for 8% of the variance at the individual parameter level (Model 13). Model 19 was the best fitting model and retained maternal risk, reading achievement, witnessing violence, age and race as predictors of violent recidivism - removing further parameters continued to worsen model fit. This model indicated that age was negatively related to violent recidivism (see Figure 17).

Non-Violent Recidivism. The baseline model for non-violent recidivism also yielded poor fit statistics and explained about 20% of the variance (see Table 26). Similar to general recidivism, removing the influence of race led to significant misfit; it accounted for 8% of the variance at the individual parameter level (Model 14). The final model (Model 19) retained race, witnessing violence and neighborhood disadvantage. As Figure 18 indicates being Black and living in a more disadvantaged neighborhood increased the likelihood of non-violent recidivism.

Table 25. Fit Statistics for Violent Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	36.77		18			0.46	0.10	0.98	.24
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	37.27	0.01	19	1	No	0.48	0.09	0.98	.25
Model 3. Reading Achievement	38.02	1.18	19	1	No	0.46	0.10	0.99	.24
Model 4. Parental Abuse	37.74	0.71	19	1	No	0.46	0.09	0.99	.25
Model 5. Peer Abuse	37.57	0.40	19	1	No	0.47	0.09	0.98	.24
Model 6. Witnessing Violence	38.00	1.12	19	1	No	0.46	0.09	0.99	.24
Predictors to Violent Recidivism									
Model 7. Maternal Risk	38.92	2.21	19	1	No	0.43	0.10	1.00	.21
Model 8. Reading Achievement	38.14	1.09	19	1	No	0.45	0.10	0.99	.23
Model 9. Parental Abuse	38.23	0.59	19	1	No	0.45	0.10	0.98	.24
Model 10. Peer Abuse	38.33	0.97	19	1	No	0.45	0.10	0.99	.23
Model 11. Witnessing Violence	38.42	1.34	19	1	No	0.45	0.10	0.99	.23
Model 12. Neighborhood Disadvantage	38.64	1.80	19	1	No	0.44	0.10	1.00	.22
Model 13. Age	**42.00**	**6.56**	**19**	**1**	**Yes**	**0.34**	**0.10**	**1.04**	**.16**
Model 14. Race (0 = White; 1 = Black)	38.44	1.52	19	1	No	0.45	0.10	0.99	.22
Model 15. Time at Risk	37.62	0.37	19	1	No	0.47	0.09	0.98	.25
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	45.17	11.40	19	1	Yes	0.25	0.11	1.08	.24
Model 17.Parent Abuse with Witnessing Violence	43.18	11.75	18	1	Yes	0.28	0.11	1.08	.26
Model 18.Peer Abuse with Witnessing Violence	43.81	9.19	19	1	Yes	0.29	0.11	1.06	.24
Combining Models for Parsimony									
Model 19. Models 3-5, 9-10, and 15	**38.22**	**1.92**	**22**	**5**	**No**	**0.54**	**0.08**	**1.00**	**.24**
Model 20. Model 19 plus 8	38.51	3.96	22	6	No	0.53	0.08	1.02	.21

Figure 17. Best Fitting Model for Violent Recidivism

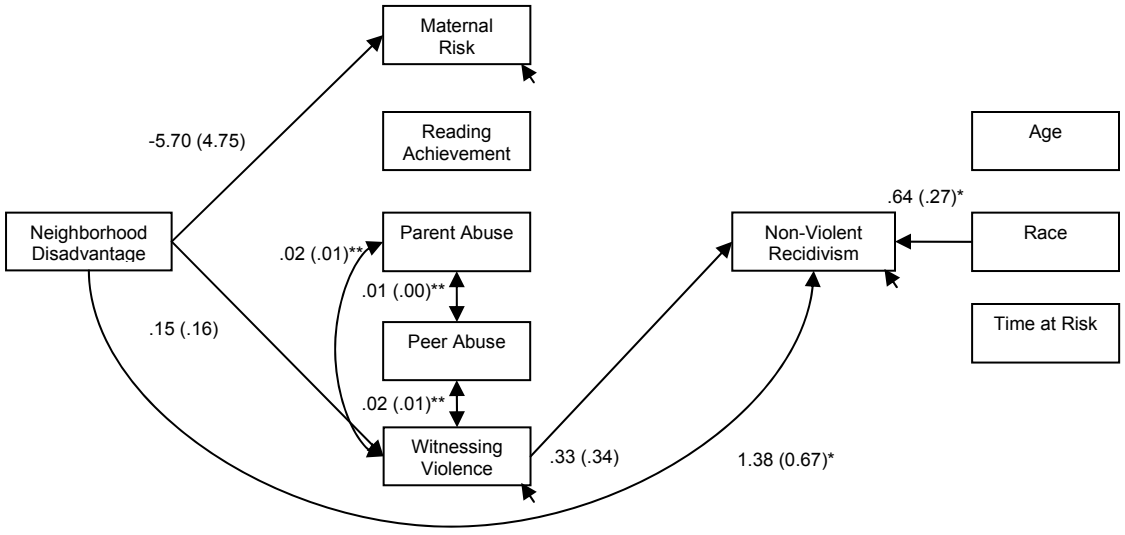


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=38.22; df = 22; CFI = 0.54; RMSEA = 0.08; WRMR = 1.00; r^2 = .24.

Table 26. Fit Statistics for Non-Violent Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	36.77		18			0.46	0.10	0.98	.19
Setting Each Parameter to 0									
Neighborhood Disadvantage to Other Predictors									
Model 2. Maternal Risk	37.27	0.01	19	1	No	0.47	0.09	0.98	.19
Model 3. Reading Achievement	38.02	1.18	19	1	No	0.45	0.10	0.99	.20
Model 4. Parental Abuse	37.74	0.71	19	1	No	0.46	0.09	0.99	.20
Model 5. Peer Abuse	37.57	0.40	19	1	No	0.46	0.09	0.98	.19
Model 6. Witnessing Violence	38.00	1.12	19	1	No	0.45	0.09	0.99	.20
Predictors to Non-Violent Recidivism									
Model 7. Maternal Risk	37.52	0.07	19	1	No	0.46	0.09	0.98	.19
Model 8. Reading Achievement	37.61	0.14	19	1	No	0.46	0.09	0.98	.19
Model 9. Parental Abuse	37.80	0.13	19	1	No	0.46	0.09	0.98	.19
Model 10. Peer Abuse	37.84	0.23	19	1	No	0.46	0.09	0.98	.19
Model 11. Witnessing Violence	38.14	0.81	19	1	No	0.45	0.10	0.99	.19
Model 12. Neighborhood Disadvantage	39.80	3.47	19	1	No	0.40	0.10	1.01	.15
Model 13. Age	37.44	0.11	19	1	No	0.47	0.09	0.98	.19
Model 14. Race (0 = White; 1 = Black)	**41.37**	**5.67**	**19**	**1**	**Yes**	**0.35**	**0.10**	**1.03**	**.11**
Model 15. Time at Risk	37.58	0.30	19	1	No	0.46	0.09	0.98	.19
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	45.17	11.40	19	1	Yes	0.24	0.11	1.08	.19
Model 17.Parent Abuse with Witnessing Violence	43.18	11.75	18	1	Yes	0.27	0.11	1.08	.19
Model 18.Peer Abuse with Witnessing Violence	43.81	9.19	19	1	Yes	0.28	0.11	1.06	.20
Combining Models for Parsimony									
Model 19. Models 2, 4-5, 7-10, 13, & 15	**37.93**	**1.78**	**24**	**8**	**No**	**0.60**	**0.07**	**1.00**	**.18**
Model 20. Models 19 plus 11	37.36	2.71	24	9	No	0.61	0.07	1.01	.17

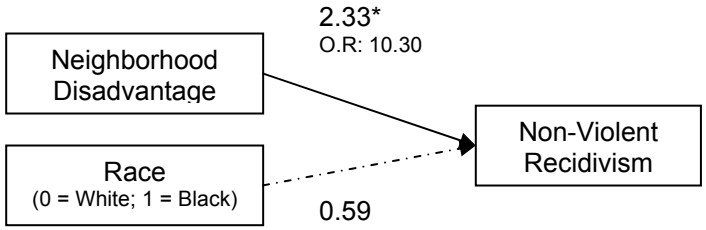
Figure 18. Best Fitting Model for Non-Violent Recidivism



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=37.93; df = 24; CFI = 0.60; RMSEA = 0.07; WRMR = 1.00; r^2 = .18.

In addition to the standard analyses, a simple logistic regression without other covariates was run. This model predicted the probability of non-violent recidivism using [$Y_n = B_o + B_1X1_n + B_2X2_n + E_n$], where Y = dichotomous outcome of whether the youth was rearrested (0 = Not Rearrested; 1 = Rearrested) for a nonviolent offense, X1 = neighborhood disadvantage and X2 = race (0 = White; 1 = Black). The model (see Figure 19) was significant ($X^2 = 11.28$, df = 2, p <.01). Neighborhood disadvantage (b = 2.33; p = .05, O.R. = 10.30) increased the odds of being rearrested for non-violent crime. That is, for each standard deviation increase in neighborhood disadvantage the odds of being rearrested for a non-violent crime increased by ten-fold. After accounting for neighborhood disadvantage, race (b = .59. p =.62) was no longer a significant predictor of non-violent recidivism.

Figure 19. Logistic Regression for Non-Violent Recidivism



Note. $\chi^2 = 11.28$; df = 2; p <.01

Recidivism – Race Specific Models.

Lastly, race specific models of recidivism were examined to determine whether race specific pathways existed. The same three sets of nested models were evaluated.

General Recidivism. The baseline model for race specific analyses demonstrated substantially better fit indices than the combined model (see Table 27). Further, it accounted for about half the variance in White girls getting rearrested and about 40% of the variance for Black girls. Individual parameter testing indicated parental

abuse (Model 9) and time at risk (Model 14) functioned differently for Black and White girls. Four additional pathways to recidivism were not equalized for these analyses including maternal risk, witnessing violence, neighborhood disadvantage, and age due to worsening fit indices or loss of explanatory power (Model 18). Model 21 (see Figure 19) was the best fitting model and indicated that parent abuse and time at risk were both positively associated with recidivism for White girls. No significant predictors emerged for Black girls.

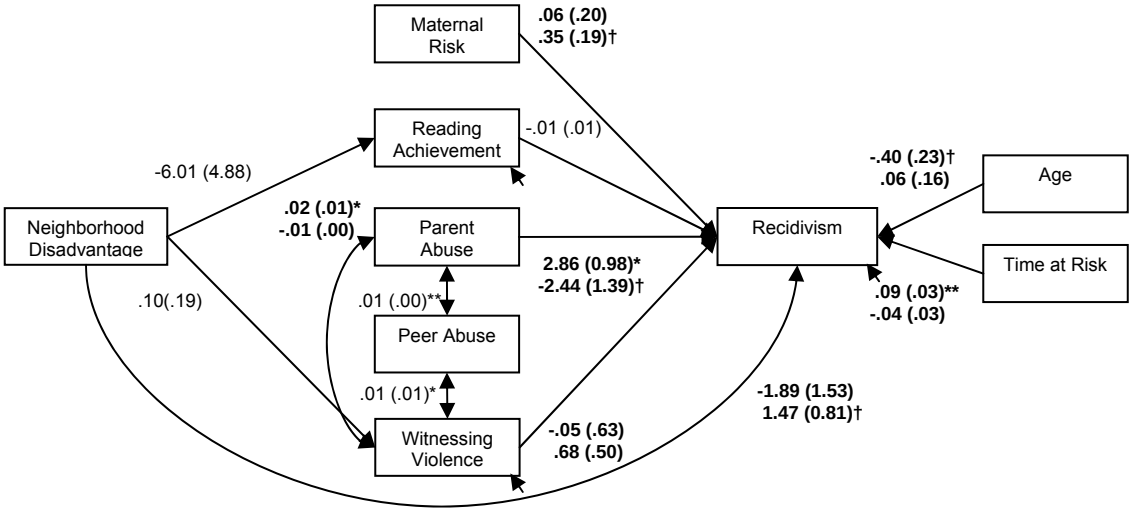
Violent Recidivism. The baseline model for violent recidivism yielded fair fit indices (see Table 28). Acceptable fit indices were maintained when allowing five parameters to vary by race: 1) reading achievement to violent recidivism, 2) parental abuse to violent recidivism, 3) neighborhood disadvantage and violent recidivism, 4) time at risk to violent recidivism and 5) parental abuse with witnessing violence. Model 21 was the best fitting model (see Figure 20) and accounted for 60% of the variance in violent recidivism for White girls and about 40% of the variance in violent recidivism for Black girls. Age was the only significant predictor for both groups.

Non-Violent Recidivism. The last model examined non-violent recidivism (see Table 29). The baseline model accounted for about a quarter of the variance for each group. Individual parameter estimates did not yield any significant misfit by equalizing the parameters. Four parameters in addition to the correlation between parental abuse and witnessing violent were free to vary by race in Model 18. This included: 1) neighborhood disadvantage to maternal risk; 2) reading achievement to non-violent recidivism; 3) parental abuse and non-violent recidivism; and 4) time at risk and non-violent recidivism. Model 21 (see Figure 22), demonstrated a positive relationship between neighborhood disadvantage and non-violent recidivism for both groups. No other variables were significant.

Table 27. Fit Statistics for Race Specific Analyses for General Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2 White	r^2 Black
Model 1. Baseline Model	24.24		22			0.87	0.05	0.92	.49	.38
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	24.86	2.08	22	1	No	0.83	0.05	0.95	.49	.38
Model 3. Reading Achievement	24.25	0.16	22	1	No	0.87	0.05	0.93	.49	.38
Model 4. Parental Abuse	23.64	0.15	22	1	No	0.91	0.04	0.93	.49	.38
Model 5. Peer Abuse	23.60	0.09	22	1	No	0.91	0.04	0.92	.49	.38
Model 6. Witnessing Violence	23.61	0.10	22	1	No	0.91	0.04	0.92	.49	.38
Predictors to Recidivism										
Model 7. Maternal Risk	24.16	0.95	22	1	No	0.87	0.05	0.93	.52	.32
Model 8. Reading Achievement	23.55	0.00	22	1	No	0.91	0.04	0.92	.49	.38
Model 9. Parental Abuse	**26.28**	**10.02**	**22**	**1**	**Yes**	**0.75**	**0.06**	**0.97**	**.46**	**.46**
Model 10. Peer Abuse	23.83	0.20	22	1	No	0.89	0.04	0.93	.48	.38
Model 11. Witnessing Violence	24.08	0.71	22	1	No	0.88	0.04	0.93	.49	.37
Model 12. Neighborhood Disadvantage	24.83	2.18	22	1	No	0.84	0.05	0.95	.51	.39
Model 13. Age	25.24	2.69	22	1	No	0.81	0.06	0.96	.49	.41
Model 14: Time at Risk	**29.95**	**10.18**	**22**	**1**	**Yes**	**0.54**	**0.09**	**1.04**	**.37**	**.36**
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	23.55	0.01	22	1	No	0.91	0.04	0.92	.49	.38
Model 16.Parent Abuse with Witnessing Violence	**26.38**	**4.51**	**22**	**1**	**Yes**	**0.75**	**0.06**	**0.98**	**.51**	**.39**
Model 17.Peer Abuse with Witnessing Violence	23.55	0.00	22	1	No	0.91	0.04	0.92	.49	.38
Combining Models for Parsimony										
Model 18. All equal but 7, 9, 11, 12, 13, 14, and 16	24.01	2.20	25	7	No	1.00	0.00	0.96	.48	.38
Model 19. All equal but 9, 12, 13, 14, and 16	24.94	2.90	26	8	No	1.00	0.00	0.96	.47	.36
Model 20. All equal	39.67	24.29	28	12	Yes	0.32	0.09	1.25	.27	.21
Model 21: Model 18 plus 2 @0, 4-5@0, 6@0, and 10@0	**25.72**	**4.83**	**27**	**10**	**No**	**1.00**	**0.00**	**1.00**	**.47**	**.38**

Figure 20. Best Fitting Model for Race Specific Analyses for General Recidivism

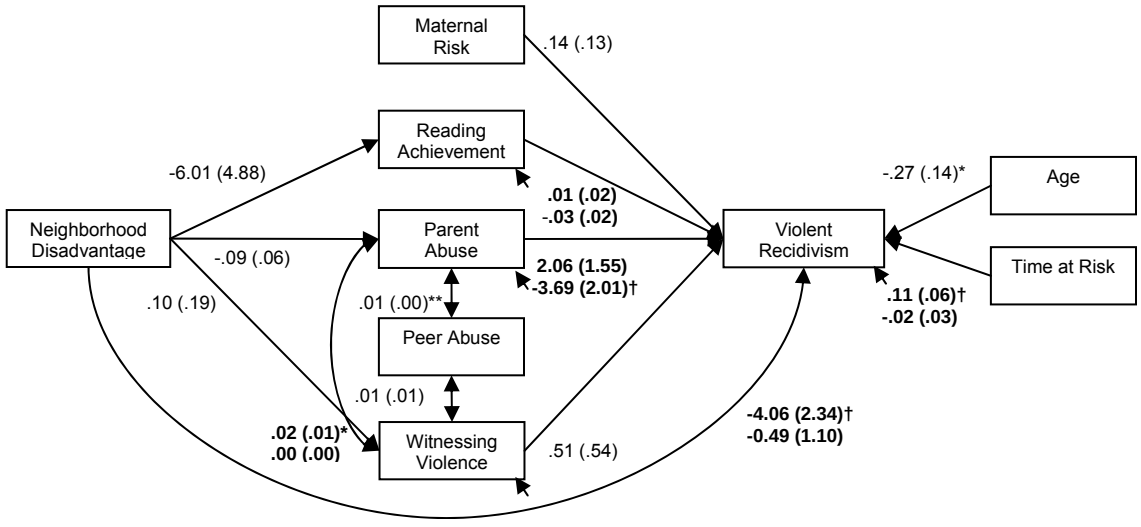


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold.
Model Statistics: X^2=25.72; df = 27; CFI = 1.00; RMSEA = 0.00; WRMR = 1.00; $r^{2\,\text{White}}$ = .47; $r^{2\,\text{Black}}$ = .38

Table 28. Fit Statistics for Race Specific Analyses Violent Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2 White	r^2 Black
Model 1. Baseline Model	24.24		22			0.81	0.05	0.92	.65	.33
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	24.86	2.08	22	1	No	0.75	0.05	0.95	.65	.34
Model 3. Reading Achievement	24.25	0.16	22	1	No	0.80	0.05	0.93	.65	.34
Model 4. Parental Abuse	23.64	0.15	22	1	No	0.86	0.04	0.93	.65	.34
Model 5. Peer Abuse	23.61	0.09	22	1	No	0.86	0.04	0.92	.65	.34
Model 6. Witnessing Violence	23.61	0.10	22	1	No	0.86	0.04	0.92	.65	.34
Predictors to Violent Recidivism										
Model 7. Maternal Risk	23.72	0.09	22	1	No	0.85	0.04	0.92	.64	.34
Model 8. Reading Achievement	24.64	1.70	22	1	No	0.77	0.05	0.94	.64	.28
Model 9. Parental Abuse	24.43	1.60	22	1	No	0.79	0.05	0.94	.66	.38
Model 10. Peer Abuse	23.86	0.25	22	1	No	0.84	0.04	0.93	.67	.32
Model 11. Witnessing Violence	23.61	0.01	22	1	No	0.86	0.04	0.92	.64	.34
Model 12. Neighborhood Disadvantage	25.71	1.59	22	1	No	0.76	0.05	0.94	.60	.37
Model 13. Age	24.31	1.22	22	1	No	0.80	0.05	0.94	.65	.39
Model 14: Time at Risk	25.59	3.24	22	1	No	0.69	0.06	0.96	.56	.30
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	23.55	0.01	22	1	No	0.87	0.04	0.92	.65	.34
Model 16.Parent Abuse with Witnessing Violence	**26.38**	**4.51**	**22**	**1**	**Yes**	**0.62**	**0.06**	**0.98**	**.69**	**.34**
Model 17.Peer Abuse with Witnessing Violence	23.55	0.00	22	1	No	0.87	0.04	0.92	.65	.34
Combining Models for Parsimony										
Model 18. All equal but 8, 9, 12, 14, and 16	24.81	3.14	26	8	No	1.00	0.00	0.97	.65	.39
Model 19. All equal but 8, 9, 14, and 16	26.09	5.71	26	9	No	1.00	0.00	1.01	.58	.38
Model 20. All equal	32.44	14.84	27	11	No	0.53	0.06	1.15	.36	.35
Model 21. Model 18 plus 2@0,5@0, 10@0	**25.36**	**4.57**	**27**	**10**	**No**	**1.00**	**0.00**	**0.99**	**.61**	**.39**

Figure 21. Best Fitting Model for Race Specific for Violent Recidivism

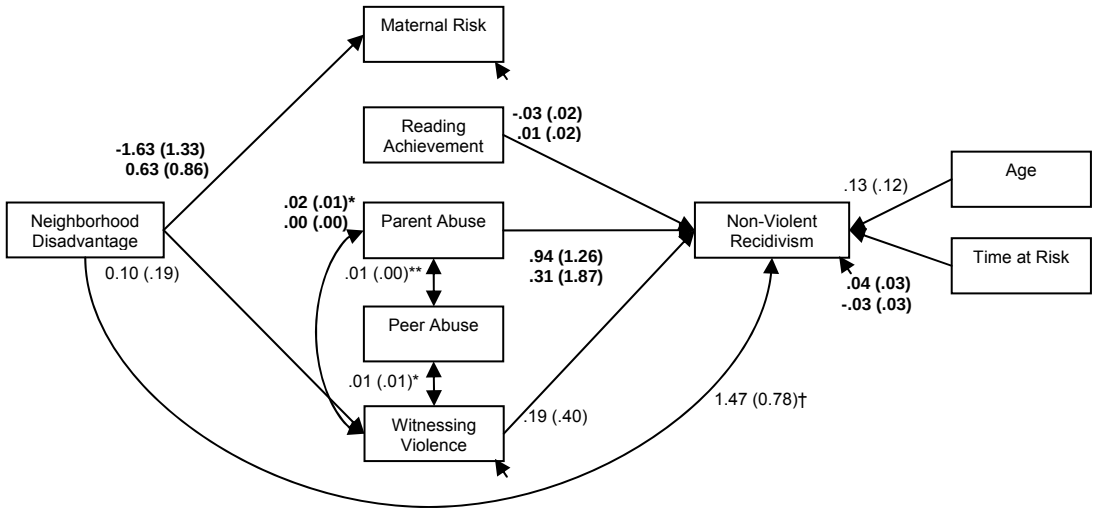


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold..
Model Statistics: X^2=25.36; df = 27; CFI = 1.00; RMSEA = 0.00; WRMR = 0.99; $r^{2\,White}$ = .61; $r^{2\,Black}$ = .39.

Table 29. Fit Statistics for Race Specific Analyses Non-Violent Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2 White	r^2 Black
Model 1. Baseline Model	24.24		22			0.66	0.05	0.92	.28	.24
Parameter Set Equal for Both Groups										
Neighborhood Disadvantage to Other Predictors										
Model 2. Maternal Risk	24.86	2.08	22	1	No	0.57	0.05	0.95	.28	.24
Model 3. Reading Achievement	24.25	0.16	22	1	No	0.66	0.05	0.93	.28	.24
Model 4. Parental Abuse	23.64	0.15	22	1	No	0.75	0.04	0.93	.28	.24
Model 5. Peer Abuse	23.61	0.09	22	1	No	0.76	0.04	0.92	.28	.24
Model 6. Witnessing Violence	23.61	0.10	22	1	No	0.76	0.04	0.92	.28	.24
Predictors to Non-Violent Recidivism										
Model 7. Maternal Risk	25.36	1.13	23	1	No	0.65	0.05	0.94	.27	.22
Model 8. Reading Achievement	24.66	1.79	22	1	No	0.60	0.05	0.94	.19	.23
Model 9. Parental Abuse	24.52	1.73	22	1	No	0.62	0.05	0.94	.24	.22
Model 10. Peer Abuse	24.24	1.11	22	1	No	0.66	0.05	0.93	.28	.21
Model 11. Witnessing Violence	23.94	0.34	22	1	No	0.71	0.04	0.93	.27	.25
Model 12. Neighborhood Disadvantage	23.65	0.05	22	1	No	0.75	0.05	0.92	.30	.23
Model 13. Age	24.24	1.11	22	1	No	0.66	0.05	0.94	.31	.23
Model 14: Time at Risk	25.36	2.88	22	1	No	0.50	0.06	0.96	.24	.25
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	23.55	0.01	22	1	No	0.77	0.04	0.92	.28	.24
Model 16.Parent Abuse with Witnessing Violence	**26.38**	**4.51**	**22**	**1**	**Yes**	**0.34**	**0.06**	**0.98**	**.28**	**.24**
Model 17.Peer Abuse with Witnessing Violence	23.55	0.00	22	1	No	0.77	0.04	0.92	.28	.24
Combining Models for Parsimony										
Model 18. All equal but 2, 8, 9, 14, and 16	24.76	3.51	26	9	No	1.00	0.00	0.97	.28	.15
Model 19. All equal but 2, 7, 8, 9, 14, and 16	24.69	2.55	26	8	No	1.00	0.00	0.96	.29	.17
Model 20. All equal	30.37	11.80	28	11	No	0.65	0.04	1.10	.08	.15
Model 21. Model 18 plus 3–5@0, 7@0, and 10@0	**28.03**	**7.81**	**29**	**13**	**No**	**1.00**	**0.00**	**1.03**	**.28**	**.15**

Figure 22. Best Fitting Model for Race Specific Analyses for Non-Violent Recidivism



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold..
Model Statistics: X^2=28.03; df = 29; CFI = 1.00; RMSEA = 0.00; WRMR = 0.96; $r^{2\,White}$ = .28; $r^{2\,Black}$ = .15.

Given the results for non-violent recidivism, the fourth hypothesis, neighborhood disadvantage would add predictive value to antisocial behavior above and beyond individual level risk factors for Black girls but not for White girls, was tested. Two separate logistic regressions were run. This model predicted the probability of non-violent recidivism using [$Y_n = B_o + B_1X1_n + B_2X2_n + B_3X3_n + B_4X4_n + B_5X5_n + B_6X6_n + E_n$], where Y = dichotomous outcome of whether the youth was rearrested (0 = not rearrested; 1 = rearrested) for a nonviolent offense, X1 = reading achievement, X2 =age, X3 = time at risk, X4 = parental abuse, X5 = witnessing violence, and X6 = neighborhood disadvantage. The models were not significant for either group (Black girls: $X^2 = 4.21$, df = 5, $p = ns$ and White girls: $X^2 = 2.33$, df = 5, $p = ns$). Therefore, individual variables were not examined.

Summary of Recidivism. Given the use of a categorical outcome which requires greater statistical power, models for recidivism were exploratory and maximized variance explained for the groups to explore any potential differences. Therefore, results should be viewed with caution and be considered preliminary. Time at risk was the only significant predictor of general recidivism. When examining the race specific associations parental abuse and time at risk were both significantly associated with general recidivism but only for White girls. In contrast, age was significantly associated with violent recidivism for both groups. Finally, race and neighborhood disadvantage were both significantly associated with non-violent recidivism. A simple logistic regression demonstrated that race did not predict non-violent recidivism after accounting for the impact of neighborhood disadvantage.

Discussion

The goals of the current study were to: 1) empirically substantiate two risk factors for antisocial behavior, neighborhood disadvantage and violence exposure, among girls in the juvenile justice system, and 2) determine whether the relationships between these

risk factors and antisocial behavior vary by race. Overall, violence exposure was associated with self report of antisocial behavior, while neighborhood disadvantage was associated with non-violent recidivism. Further, once neighborhood disadvantage was taken into account, racial disparities in non-violent recidivism dissipated. These findings suggest that neighborhood factors play an important role in the disproportionate representation of Black girls in the justice system. Given the numerous statistical models and findings, this first section of the discussion focuses briefly on whether the hypotheses were supported. Next, large themes supported by analyses are examined within a contextual framework. Lastly, limitations and future research are discussed.

Are Black female juvenile offenders characterized by higher levels of neighborhood disadvantage and violence exposure as compared to White female juvenile offenders?

Black girls were significantly more likely to live in disadvantaged neighborhoods than their White counterparts. These results are consistent with the vast body of research on adults and males (Peterson & Krivo, 2005; Peeples & Loeber, 1994; Sampson et al., 2005; Silver et al., 1999; South & Messner, 2000). Additionally, both Black and White girls reported equal and high levels of violence exposure. These findings are in contrast to data from normative samples which suggest that Black girls are more likely to experience and witness violence (Buka et al., 2001; Finkelhor et al., 2005; Kilpatrick & Saunders, 1999; Piquero & Buka, 2002). Similarly, these findings are discrepant with a study on girls in the justice system which found higher levels of violence exposure for White girls (Holsinger & Holsinger 2005). The suggestion that White girls require a higher threshold of risk, i. e., victimization, to enter the legal system was not supported. Our findings indicate that Black and White female juvenile offenders have similar adverse experiences at a micro-level (i.e., violence exposure) but the macro-level contexts within which these experiences occur are different and more disadvantaged for Black girls.

Is neighborhood disadvantage significantly associated with violence exposure?

Neighborhood disadvantage was not related to parental abuse or peer abuse but slightly related to witnessing violence. At the bivariate level, this relationship only existed between *neighborhood disadvantage* and *witnessing neighborhood violence.* Although unexpected, these findings are consistent with previous research on male juvenile offenders in which there was no association between neighborhood disadvantage and parental or peer level variables while neighborhood disadvantage was related to perceptions of neighborhood disorder (Chung & Steinberg, 2006).

This finding may be partially explained by method variance (census versus self report) in assessment. The use of macro-level data to approximate micro-level phenomenon could be misleading. Levels of neighborhood disadvantage may not automatically equate to high levels of adverse experiences such as violence exposure. Similarly, individual level observations may not reflect neighborhood level processes. Indeed, there may be heterogeneity within census tracts and girls in less disadvantaged neighborhoods may still be able to seek out the "worst" part of their neighborhoods.

It is encouraging that neighborhood disadvantage did not equate to high levels of violence exposure for Black girls. Other factors such as parental supervision, school attachment, collective efficacy, and engagement in community activism, may act as protective factors that buffer against exposure to violence in disadvantaged neighborhoods (Browning, 2002; Letiecq & Koblinsky, 2003; Patchin, Huebner, McClskey, Varano, & Bynum, 2006; Salzinger, Ng-Mak, Feldman, Kam, & Rosario, 2006; Sampson, 1993; Sampson, Raudenbusch, & Earls, 1997).

Is neighborhood disadvantage directly and/or indirectly related to antisocial behavior?

Findings varied by type of outcome. First, neighborhood disadvantage was not related to self report of offending. These results are consistent with some past research which indicates that subjective (e.g., self report) indicators of neighborhood such as

witnessing violence are more likely to predict antisocial behavior than objective indicators (e.g., census data) such as neighborhood disadvantage (Chung & Steinberg, 2006; Patchin et al., 2006). Further, other studies (Greenberg, Lengua, Coie, & Pinderhughes, 1999; Simons et al., 1996) have found that the association between neighborhood disadvantage and deviant behavior was significant for boys but absent for girls. The current findings support the notion that girls react differently to factors within their neighborhoods compared to boys and their subjective experiences are better predictors of whether they engage in antisocial behavior than are macro-level, objective indicators.

Additionally, research has shown that women are more likely to be violent within close relationships and within their home than men (Greenfeld & Snell, 1999; Monahan et al., 2001; Robbins, Monahan, & Silver, 2003). Perhaps, high risk girls engage in antisocial acts within a more immediate social context (e.g., close relationships and romantic partners) that is not as strongly impacted by the broader context within which they reside. As such, research that has demonstrated a link between neighborhood disadvantage and antisocial behavior with men (who are more likely to engage in neighborhood-based crimes such as gang activity and stranger violence) may not translate to women because of the differences in location and target of victims.

. With regard to the lack of predictive validity of the Gini Index, it seems that at a theoretical level, violence catalyzed by *relative* rather than *absolute* disadvantage stems from a competition for scarce or unavailable resources and is propelled by comparison of social status. While research has generally found a robust relationship between income inequality and violence using official statistics and crime data (Daly, Wilson, & Vasdev, 2001; Hsieh & Pugh, 1993; Wilkinson, 2004), no studies have examined whether this concept applies to both men and women. From an evolutionary perspective, relative disadvantage may be a stronger predictor for male antisocial behavior because

men may be more impacted by social status and social hierarchy as providers than women as nurturers.

Neighborhood disadvantage was directly related to recidivism for non-violent crimes. Thus, one possibility is that the higher rates of recidivism for Black girls may be partially due to other community level factors such as higher police surveillance and willingness by police to arrest individuals in disadvantaged neighborhoods. Indeed, race was not a significant predictor of non-violent recidivism after accounting for neighborhood disadvantage, which suggests that neighborhood context does play a role in the higher rates of rearrest for non-violent crimes with Black girls.

Did neighborhood disadvantage add predictive value to antisocial behavior above and beyond individual level risk factors for Black girls but not White girls?

Neighborhood disadvantage did not add predictive value to antisocial behavior for Black or White girls. However, consistent with previous research (Krivo & Peterson, 1996), neighborhood disadvantage functioned similarly for both Black and White girls.

Violence Exposure and Antisocial Behavior

The violence exposure variables, peer physical abuse, parental physical abuse, and witnessing violence were related to self report and official records of offending. A divergent pattern of results was observed with regard to form, outcome, and race.

Peer Physical Abuse. In the current study, peer physical abuse was conceptualized as being abused by friends and romantic partners. This subscale was significantly associated with Wave I total, violent, and delinquent behaviors for both Black and White girls. Given that most of the conflict within these relationships was bi-directional in nature and that it is difficult to tease apart these relationships with regard to hierarchy (as with parents) or age, these results are couched in the literature on deviant peers.

Studies have repeatedly shown that peer groups play a powerful role in antisocial behavior during adolescence (Chung & Steinberg, 2006; Dishion, Andrews, & Crosby, 1995; Dishion, Eddy, Haas, Li, & Spracklen, 1997; Patterson, Dishion, & Yoeger, 2000; Henry, Tolan, & Gorman-Smith, 2001). The current results replicate previous research with boys which found that peers' violence was related to both an individual's violent and nonviolent behaviors (Henry et al., 2001). As with the current study, this relationship was stronger for delinquent rather than violent behaviors (Henry et al., 2001).

The conflict within these peer relationships and their linkage to Wave I antisocial behavior likely stems from several factors. First, girls learn and are reinforced for using physical aggression to manage disagreements with others while missing out on the opportunity to learn less aggressive, more prosocial types of conflict management. This hypothesis is supported by the work of Dishion and colleagues (1995), who found that antisocial male dyads were signified by coercive communication styles. Second, girls have the opportunity to engage in antisocial behaviors because their peers are aggressive individuals and likely engage in antisocial acts themselves. Third, the relationships assessed are highly aggressive in nature and conflict is bi-directional,[8] so these very peers could also be the "victims" of girls' aggression.

The predictive validity of peer abuse was not consistent over time in a multivariate model. Consistent with the judgment framework, as these girls make the transition out of adolescence, peer groups may be less influential (Scott, Reppucci, & Woolard, 1995) and as a result a less prominent risk factor. Further, research on normative adolescent development suggests that perhaps these girls and their friends may grow out of antisocial behavior (Moffitt, 1993) and be less likely to engage in

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[8] Pearson's correlation between the subscales on which the girl was the perpetrator as compared to victim within these relational contexts was extremely high (Friends: $r = .85$, $p < .001$; Romantic Partners: $r = .73$, $p < .001$)

delinquent activities. Responsibilities like child care and employment may preclude the girls and their friends from engaging in antisocial behaviors.

Witnessing Violence. Witnessing violence was also a predictor of antisocial behavior at a bivariate and structural level, and was associated with Wave I total, violent and delinquent behaviors and Wave II total and delinquent behaviors. The strength of association between witnessing violence and antisocial behavior varied. In Wave I, the associations were generally more robust for White girls; however, in Wave II, the associations were only significant for Black girls.

Similar to peer abuse, the relationship between witnessing violence and antisocial behavior may be a context-dependent, bi-directional association. That is, girls may not just be witnessing the violence but may also be involved in perpetrating or perpetuating the violence. For example, a girl may watch her boyfriend shoot a member of another gang or be "backing up" a friend who is assaulting someone else. Further, witnessing violence likely eases the girl's ability to engage in antisocial behavior by providing access to deviant others, weapons, and training in antisocial acts. Indeed, Halliday-Boykins & Graham (2001) found that community violence exposure, deviant peer relationships, and violent behavior are each an outcome of other risk factors. They conclude that these variables are best represented as a general involvement in violence rather than having causal relationships with one another. This idea of witnessing violence, peer abuse, and antisocial behavior all being inter-related explains the rather robust association between these variables at Wave I. It may further explain the weaker relationships with Wave II antisocial behavior. All three of these variables were reported

at lower levels at Wave II[9] and other, more prevalent, risk factors may better account for engaging in antisocial behavior post-release.

Further, while peer relationships may be less influential over time, the quality of neighborhood context to which the girl returns from incarceration may be more stable. As a result, Black girls, who are more likely to live in disadvantaged neighborhoods, may continue to witness violence and have "access to" antisocial behavior more regularly than White girls.

Parental Physical Abuse. Parental physical abuse was associated with Wave II violent behaviors and general recidivism for White girls but not Black girls. The relationship between physical abuse and antisocial outcomes has been well documented and was expected (English et al., 2001; Widom, 1989; Resnick, Ireland, & Borowsky, 2004; Zingraff et al., 1993); thus the lack of relationship for Black girls was surprising.

Several factors could account for this finding. First, previous research has found that parental perceptions of neighborhood safety mediate their parenting style and that coercive parenting may be used more in disadvantaged neighborhoods in order to protect children (Tolan, Gorman-Smith, & Henry, 2003). For those living in more disadvantaged neighborhoods, coercive and even aggressive parenting styles may be utilized as a method to keep girls at home and out of trouble. The lack of a significant correlation between parental abuse and witnessing violence for Black girls further supports this notion.

Second, the lack of association for Black girls is consistent with previous research on ethnic differences, parenting styles, and child outcomes (Dixon, Graber, Brooks-Gunn, 2008; Fagan, 2000; Lansford, Deater-Deckard, Dodge, Bates, & Petit, 2004; Lau, Litrwinik, Newton, Black, & Everson, 2006; Polaha, Larzelere, Shapirol, &

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[9] These analyses are not reported but are available upon request. Briefly, a series of paired sample T-tests were conducted. All forms of violence exposure were reported at lower levels at Wave II.

Petit, 2004). Black families tend to use more restrictive parenting (Dixon et al., 2008; Fagan, 2000), which does not necessarily translate to negative outcomes for Black youth (Fagan, 2000; Finkelstein, Donenberg, & Martinovich, 2001). A small body of research has documented that stronger forms of physical discipline are related to fewer externalizing problems among Black Americans (Lansford et al., 2004; Polaha et al., 2004) [10] regardless of neighborhood context or SES (Lansford et al., 2004). The use of physical punishment within minority families may stem from stress and cultural practice (Lansford et al., 2004). Taken together, researchers have argued for a cultural and context-sensitive approach to understanding parenting in non-White families.

Third, our measures may not have captured what Black girls consider to be *abusive* behaviors. Ogbu's (1993) culturally relative model of socialization posits that the meaning of specific behaviors may vary between cultural groups. Indeed, the personal narrative and emotional valence the girls' ascribe to the use of these "physical" acts by their parents may vary depending on the family's culture and the broader context within which the family resides. Hence, if a behavior is considered normative or acted on in good faith, the detrimental effects of the behavior might be attenuated. So, to some extent, these girls may have viewed the physical acts by parents as having been done in their best interest.

Correlations among Violent Exposure Variables. The significant correlations among the violence exposure variables were expected. Several studies have found that victimization experiences tend to be multiple in type and incident (Brady & Caraway, 2002; Fehon et al., 2001; Muller et al., 2000; Saunders, 2003). Further, studies have found that coercive parenting is related to youth affiliation with deviant peers (Brody et

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[10] Notably, several studies have used the CTS aggression subscale. Although there appears to be item overlap, the exact items used in the various studies are unknown. The Lansford study included three items: 1) slapping or hitting with their hand, 2) spanking or 3) using a paddle or a belt.

al., 2001). These results support the notion that most of these girls experience violence exposure in multiple contexts and relationships.

Reading Achievement.

A surprising finding was the positive relationship between reading achievement and Wave I antisocial behavior. Within this highly select sample, the smarter the girl, the more crimes she reported engaging in prior to incarceration. Although initially counter-intuitive, the results make more sense upon reflection. In essence, the smarter girls were able to "get away" with engaging in more crimes before getting arrested or incarcerated. Post-release bivariate associations support this notion to some extent - no significant results emerged between reading achievement and self report of offending, but girls with lower reading achievement scores were more likely to get rearrested. This implies that reading achievement scores were not related to whether a girl continued to offend after release but was related to whether the girl got caught for these behaviors.

Differences in Self Report and Official Record of Offending.

When examining the prevalence in antisocial behavior, the majority of girls continued to engage in antisocial behavior. While there were no significant racial differences in self report of offending, racial differences emerged with official records. This racial disparity points to neighborhood factors that perpetuate the incarceration of Black girls in the justice system. Indeed, the biases present at the community level may include factors previously mentioned such as police surveillance, parole surveillance, weapon access, police willingness to arrest in high crime neighborhoods, and neighborhood level violence. It seems that Black girls are not more likely to engage in antisocial behavior but are more likely to get caught for these behaviors.

The lack of racial differences with regard to violent recidivism could be attributed to several factors: 1) trends were in the expected direction and given that 70% of the girls arrested for a violent crime were Black, the null results may be due to low base

rates and statistical power rather than a real lack of difference; 2) violent offenses are more likely to come to the attention of officials given that they usually entail an injured victim and as a result may impact Black and White girls equally; and 3) violent offenses may lead to more arrests since the chances of seeing and identifying the perpetrator is higher as compared to property crimes such as auto theft or breaking and entering.

Race Specific Pathways

In terms of race specific pathways, no consistent picture emerged. In general, with regard to Wave II antisocial behaviors, bivariate and multivariate analyses indicated that physical abuse was more strongly associated with antisocial behavior for White girls; whereas witnessing violence was more strongly associated with antisocial behavior for Black girls[11]. There are two possible explanations for these race specific pathways.

First, although similar levels of violence exposure were reported for the two groups, the nature of the violence exposure may have been different. White girls reported that paternal and maternal physical abuse was more likely to co-occur. Hence, they were more likely to report being physically abused within both relationship contexts, and as result, may have experienced more severe and chronic physical abuse. Similarly, Black girls lived in more disadvantaged neighborhoods and may have witnessed neighborhood violence that was qualitatively different. Thus, severity and frequency of violence exposure may be more likely to predict antisocial behavior rather than the specific type of violence exposure, i.e., the chronicity of risk within a specified group may determine antisocial behavior more than the form of that risk.

Second, it is possible that macro-level risk factors may trump micro-level risk factors in predicting antisocial behavior in disadvantaged neighborhoods. When there are fewer macro-level risk factors, then individual level factors may come to the forefront

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[11] It remains unclear why witnessing violence is more predictive of Wave I antisocial behavior for White girls.

and operate as predictors of antisocial behavior. In essence, the broader context within which Black girls live may impact their likelihood of antisocial behavior more than White girls, since they live in less disadvantaged neighborhoods. Similarly, micro-level processes such as physical abuse may come to the forefront for White girls because they do not live in neighborhoods that are as disadvantaged as that of Black girls.

Future Research and Limitations

The lack of significant relationships between: 1) neighborhood disadvantage and peer/parental abuse and 2) neighborhood disadvantage and self report of offending may be due to extreme sampling. Specifically, our sample of aggressive girls are all at high risk for experiencing physical abuse, witnessing violence, and engaging in antisocial behavior. It may be that, as with community populations, those in disadvantaged neighborhoods are more likely to experience physical abuse by peer and parents. However, those in the less disadvantaged neighborhoods may have been the *high risk families* that were just as likely to experience these stressors. Future studies should continue to examine whether differences exists with regard to prevalence and function of risk factors in an effort to examine whether race specific risk profiles emerge for female juvenile offenders.

Although this is a rather large sample size for such an extreme population, when data are separated by race the sample sizes decrease to below 100 for each group. As such, there were several positive trends that may not have reached significance because of lower statistical power. The null findings with regard to neighborhood disadvantage and self report of offending should be interpreted cautiously. Although direct effects were not apparent, there is the possibility that other potential mediators of neighborhood disadvantage such as personality traits, impulsivity (Lynam et al. 2000), pubertal timing (Obeidallah-Davis, 2002) or substance use could indirectly impact antisocial behavior. Future studies should continue to examine the direct and indirect

impact of neighborhood disadvantage to determine whether null findings replicate and/or other mechanisms emerge.

Only Black and White girls were examined and the results cannot extend to other minority groups such as Hispanic Americans. The changing demographics of the country and the higher percentage of Hispanic Americans necessitates that future studies include them and other ethnic groups in an effort to incorporate a culturally sensitive framework for examining macro- and micro-level risk factors.

Implications

Although our results warrant replication, there are several important implications. First, as with boys, girls who have the opportunity to associate with deviant peers and witness violence in their community are more likely to engage in antisocial behavior. Targeting macro and micro-level factors within a community psychology framework may assist in reducing antisocial behavior. For example, Dodge, Dishion, & Lansford (2006) suggest that community programs and after-school programs using a positive youth development model that serves all youth (rather than just deviant youth) can provide these youths with an opportunity to learn skills and interact with positive adults and non-deviant peers. Time that would be spent on antisocial activities with friends could be redirected to more prosocial activities. These researchers suggest that high-structure, close supervision programs can prevent youth from associating with deviant peers and witnessing violence. Community level improvements such as the YMCA, community centers, and boys and girls clubs where youth can congregate with adult supervision would be beneficial towards achieving these goals.

Second, prevention and intervention efforts may need to be tailored for the two groups. For example, resolving issues related to physical abuse, such as acting out and engaging in attention-seeking behaviors may be of more importance for White girls. Given that witnessing violence was a stronger predictor for Black girls at Wave II, skills

building programs aimed at avoiding becoming entangled in community violence, such as enhancing coping skills and avoiding peer pressure may be of prime importance for this group (Dempsey, 2002). For both groups, avoiding conflict-ridden relationships and promoting prosocial conflict management would be useful. Regardless, programming should incorporate factors that are culturally driven.

Third, although not directly investigated in the current study, perhaps enhancing community surveillance that curtails school and community violence such as neighborhood watch is likely to result in decreased levels of antisocial behaviors. As such, generic policies that use community intervention models and address neighborhood disorder and neighborhood cohesion may be beneficial for all girls. Perhaps using churches, schools, and other community settings as meeting places for discussing concerns within the neighborhoods can foster such cohesion.

Conclusions

The results of the present investigation foster the idea that race encompasses a complex socio-cultural phenomenon. As such, race specific processes that occur at both a macro and micro-level are functioning to differentiate the pathways by which these girls reenter the justice system and engage in violent behaviors. Indeed, these results echo previous research which has found that macro-level factors are likely to contribute to the over-representation of Black Americans in the justice system (Peeples & Loeber, 1994; Peterson & Krivo, 2005). They further argue for increased attention to race specific risk models for antisocial behavior as they may provide a unique window in delineating the causes behind the disproportionate representation of Black Americans in the justice system and inform differential modes of intervention.

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APPENDIX A: CONSENT FORMS

WAVE I

Informed Consent Agreement
Parental Consent Form
Project Title: Gender and Aggression

January, 2003

Dear Ms. X,

We are writing to tell you about a study of female juvenile offenders that is being conducted by researchers at the University of Virginia in conjunction with the Culpepper Juvenile Correctional Center. Your daughter is eligible for this study because she is staying Culpepper Juvenile Correctional Center as of (insert date). We have listed below all the details of the study. We will also be holding an information session for parents on Sunday (insert date) during normal visitation hours. For more information about this study you can contact Dr. Dale Shulz at Culpepper Juvenile Correctional facility (540) 727-3306. You can also call Samantha Syndor, our Project Coordinator, at (434) 982 5666, if you have any questions about the study.

The purpose of this study is to examine the different events and issues that affect the lives of girls who are in contact with the juvenile justice system. Your child will be asked to answer questions about herself and the events that she has experienced throughout her life. We want to make sure that you understand what your child's participation in this study involves so that you may decide whether or not you would like her to be involved. Please review the information below carefully.

Thank you for your consideration.

Sincerely,
N. Dickon Reppucci, PhD.

<u>What child will do as part of the study</u>
If you decide that your child can participate in the study, your child will be asked to complete a brief survey and participate in an interview. If your child agrees to participate, information from your child's interviews and questionnaires, and information contained in your child's file will be used in this study. The interview with your child will be recorded on audio tape. We may also contact your child over the next three years to collect similar information. At that time, you and your child can decide whether you wish for him or her to participate any further. Your child will be provided with the same information about the study and asked if they want to participate.

Time required
The interview will not exceed 2 hours in length. Your child can choose not to answer any question. Your child may also stop their participation in the study at any time. Your child will be given frequent breaks should she become tired and she may request to withdraw from the interview at any point.

Risks
Research studies often involve some risks. The risks of this study are that your child might become tired from talking with us during the sessions. Or, she may become slightly upset because we are talking about personal matters. If your child becomes too tired or upset the interviewer will stop the session and make sure your child is okay.

Benefits
There are no direct benefits to your child for participating in this research study.

Voluntary participation
The alternative is not to participate in this study. This study is completely voluntary. It is in NO way related to your child's case or how she will be treated at the Correctional Facility. If your child participates in this study, it will not affect how long she is at the Correctional Facility. You or your child can stop participation in the study at any time.

Confidentiality
The information that your child gives in the study will be handled confidentially. We will do everything we can to keep others from learning about your daughter's participation in the research. To further help us protect your child's privacy, the investigators have obtained a Confidentiality Certificate from the Department of Health and Human Services. With this Certificate, the investigators cannot be forced (for example by court subpoena) to disclose information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings. Disclosure will be necessary, however, upon request of Department of Health and Human Services for the purpose of audit or evaluation.

You should understand that a Confidentiality Certificate does not prevent you or a member of your family from voluntarily releasing information about your daughter's involvement in this research. Note however, that if an insurer or employer, learns about your child's participation, and obtains your consent to receive research information, than the investigator may not use the Certificate of Confidentiality to withhold this information. This means that you and your family must also actively protect your own privacy.

Information your child shares with us will be kept confidential. However, if we learn about serious harm to your child or others, we would take steps to protect your daughter and other people even if it required telling the authorities without your daughter's permission.

No one at the Correctional facility or in juvenile court will know what your youth said to the interviewer. We will not put her name on any of the information we collect. Instead, we will use a code number. We will keep the list of names of participants in a separate locked file to avoid any possibility of interviewing the same child twice over the course of the study. When the study is completed and the data have been analyzed, the list will be destroyed. The audio tape of the interview with your child will be coded by a group of graduate students and will not contain any identifying information. This tape will be

destroyed when the study is completed. In addition, if your child withdraws from the study the audio tape will be destroyed. The results of this study may be published in scientific literature, but no publications will contain information that will identify your child.

Payment
Your child will not receive any payment for his or her participation in this study.

Rights to withdraw from the study
Your child has the right to withdraw from the study at any time without penalty.

How to withdraw from the study
If your child wants to withdraw from the study, she can tell the research assistant and she will be escorted back to her room by correctional center staff.

Who to contact about your in the study
Dr. Luke Kelly, Chairman, Committee for the Protection of Human Subjects, 287 Hall, University of Virginia, Charlottesville, VA 22903, (434) 924-7471.

Who to contact if you have questions about the study
N. Dickon Reppucci, Candice Odgers, or Mandi Burnette, Psychology Department1102 Gilmer Hall, University of Virginia, PO Box 400400, Charlottesville, VA 22903 (434) 982 5052.

Copies of the results of this study, upon its completion, may be obtained by contacting:
Dr. N. Dickson Reppucci, Psychology Department,
University of Virginia, PO Box 400400, Charlottesville, VA, 22903
(434) 924-0662.

Who to contact about your child's rights in the study:
Dr. Luke Kelly, Chairman, Institutional Review Board for the Social and Behavioral Sciences, 2400 Old Ivy Road, Suit C141, Room 156, University of Virginia, P.O. Box 800392, Charlottesville, VA 22908-0392.
Telephone: (434) 243-2915

Agreement
I agree to have my child participate in the research study described above.

Signature: _____ Date: _____

You will receive a copy of this form for your records.

Informed Consent Agreement
Project Title: Gender and Aggression
Youth Version

Please read this consent agreement carefully before you decide to participate in the study.

Purpose of the research study:
We are conducting a research study that examines the events and issues that affect the lives of girls who are in contact with the juvenile justice system. You will be asked to answer questions about yourself and the events that you have experienced throughout your life.

What you will do in the study:
If you decide to participate, information from interviews and questionnaires completed by you and information contained in your file at facility will be used in this study. The interview portion of this study will be recorded on an audio tape. We may also contact you over the next three years to collect similar information and at that time you can decide whether or not you wish to participate further.

Time required:
You will spend about 2-3 hours in completing an in-person interview and approximately 45-60 minutes completing a self-report survey. The interview and self-report surveys will be administered over 2 to 3 sessions.

Risks:
Research studies often involve some risks. You might get a little upset by answering some of these questions. If you have any concerns or start to feel upset, just tell me and we can take a break or stop the interview.

Benefits:
There are no direct benefits to you for participating in this research study. The study may help in future planning for treatment with youth who are involved in the juvenile justice system.

Confidentiality:
The information that your child gives in the study will be handled confidentially. We will do everything we can to keep others from learning about your participation in the research. To further help us protect your privacy, the investigators have obtained a Confidentiality Certificate from the Department of Health and Human Services. With this Certificate, the investigators cannot be forced (for example by court subpoena) to disclose information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings. Disclosure will be necessary, however, upon request of Department of Health and Human Services for the purpose of audit or evaluation.

You should understand that a Confidentiality Certificate does not prevent you or a member of your family from voluntarily releasing information about your involvement in this research. Note however, that if an insurer or employer, learns about your participation, and obtains your consent to receive research information, than the

investigator may not use the Certificate of Confidentiality to withhold this information. This means that you and your family must also actively protect your own privacy. Information that you share with us will be kept confidential. However, if we learn about serious harm to you or others, we would take steps to protect you and other people even if it requires telling the authorities without your permission.

Your information will be assigned a code number. The list connecting your name to this code will be kept in a locked file. When the study is completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report. The audio tape of the interview will be coded by a group of graduate students. All identifying information will be removed from the tape and the tape will be destroyed at the end of this study. If you decide to withdraw from the study the tapes will also be destroyed.

Voluntary participation:
Your participation in the study is completely voluntary. Deciding to be, or not to be, a participant in the study is completely up to you.

Right to withdraw from the study:
You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study:
If you want to withdraw from the study, just tell me and we will stop.

Payment:
You will receive no payment for participating in the study.

Who to contact if you have questions about the study:

Who to contact about your rights in the study:
Luke Kelly, Chairman, Institutional Review Board for the Social and Behavioral Sciences, 2400 Old Ivy Road, Suit C141, Room 156, University of Virginia, P.O. Box 800392, Charlottesville, VA 22908-0392. Telephone: (434) 243-2915.

Agreement:
I agree to participate in the research study described above:

Signature: _____ Date: _____
You will receive a cop of this form for your records.

WAVE II

VOLUNTARY INFORMED CONSENT FOR THE INTERVIEW
Parent Version

This study is titled “The Gender and Aggression Project”. The study is being conducted by Dr. Dick Reppucci, Professor of Psychology at the University of Virginia. The purpose of this study is to follow up on events and issues in your child's life since she has left Culpeper Juvenile Correctional Center. Information obtained from this study will be used to identify both helpful and hurtful factors that impact the lives of girls released from the juvenile justice system.

All girls that participated in the study at Culpeper Juvenile Correctional Center are being contacted and ask to participate in this second interview. Your daughter's participation is voluntary. If you decide that she can participate, she will be asked to complete a series of questions regarding the circumstance in her life since her release from CJCC. Her participation will require about 90 minutes. We may contact her and you again over the next three years to collect similar information and at that time she and you can decide on whether or not she should participate.

Risks and Benefits
Your daughter might get a little upset by answering some of these questions. If she has any concerns or starts to feel upset, we will stop the interview and make sure she is okay. There are no direct benefits to participating. Her participation may help us in future programming and treatment for girls in the justice system.

Confidentiality
The information that she gives us will be handled confidentially. To help protect her privacy, we have obtained a Federal Certificate of Confidentiality from the Department of Health and Human Services. With this Certificate, the investigators cannot be forced, even by court subpoena, to disclose information for any federal, state, or local proceedings. Disclosure will be necessary, however, upon request of Department of Health and Human Services for the purposes of an audit or evaluation.

You should understand that a Confidentiality Certificate does not prevent you, your child or another member of your family from voluntarily releasing information about her involvement in this research. Note however, that if an insurer or employer learns about her participation and obtains your consent to receive research information, then the investigator may not use the Certificate to withhold this information. This means that you and your family must also actively protect your own privacy.

Information will be kept confidential. However, if we learn about harm to your daughter or others, we may need to take steps to protect her and other people even if it requires telling the authorities without your permission.

Her responses are confidential. Answers will be available only to the researchers. The survey will be given a code in place of a name and will be maintained in a locked filing cabinet in a locked research office. Only members of the research team will have access to her answers. Her name will not be used in any report. All answers will be summarized so no one will know her individual answers. If you withdraw your daughter from the study at anytime, her information will be destroyed.

Voluntary Participation & Withdrawal
Your child's participation in the study is completely voluntary and she has the right to withdraw from the study at any time without penalty. You also have the right to withdraw her at any time.

Payment
We will pay your daughter $50 if she is living in the community. If she is in an institution, we will pay her only if her institution allows payment.

Questions about the Study
You may talk to the interviewer if you have any questions now or contact N. Dickon Reppucci or Preeti Chauhan, Department of Psychology, PO Box 400400, University of Virginia, Charlottesville, VA 22903 (434)982-5052.

Questions about your Rights
If you have any questions research rights, please contact the University of Virginia Institution Review Board for Social and Behavioral Sciences at (434) 924-5999.

Please check the box below and sign your name if you wish for your child to participate in this research being conducted.

☐ I AGREE to have my daughter participate in this study.

_____
Printed Name of Participant

_____ _____
Signature of Participant Date

_____ _____
Witness (Required in DOC) Date

VOLUNTARY INFORMED CONSENT FOR THE SCHOOL RECORDS

In addition to the information we attain during the interview, we would like your permission to take written notes from your child's school records. This information will include their grades, their achievement test scores, their attendance information, any disciplinary information available including suspensions and expulsions, and whether they were promoted or retained. If your child has a confidential folder, we would like to take written notes on what type of special education services your child has been receiving through the school (e.g., resource class, academically gifted, self-contained class, etc.), when they qualified for them, and the amount of services they received.

We would like to collect the teacher report and the school records information from any school facility your child attends, whether it is regular school or residential facility, detention or training school.

We will take the information we collect about your child and place it in our files. The same confidentiality issues apply as those stated above. This means that the information we have about your daughter is protected. No one can use the courts to get the information from us.

If you agree to allow the UVA Girls Study to have access to this information please sign in the space provided below. This consent is valid until one year from the date below. If you choose to withdraw from the study, permission to access school records will end at the same time.

If you have any questions about your rights as a research participant, please contact the University of Virginia Institution Review Board for Social and Behavioral Sciences at (434) 924-5999.

My name is: (Print) _____

School I will be attending in 05-06**:** _____

If not currently enrolled in school, name of last school attended:_____

VOLUNTARY INFORMED CONSENT FOR THE INTERVIEW
Youth Version

This study is titled “The Gender and Aggression Project”. The study is being conducted by Dr. Dick Reppucci, Professor of Psychology at the University of Virginia. The purpose of this study is to follow up on events and issues in your life since you've left Culpeper Juvenile Correctional Center (CJCC). Information obtained from this study will be used to identify both helpful and hurtful factors that impact the lives of girls released from the juvenile justice system.

All girls that participated in the study at CJCC are being contacted and ask to participate in this second interview. Your participation is voluntary. If you choose to participate, you will be asked to complete a series of questions regarding circumstance in your life since release from CJCC. Your participation will require about 90 minutes. We may contact you again over the next three years to collect similar information and at that time you can decide on whether or not you wish to participate.

Risks and Benefits
You might get a little upset by answering some of these questions. If you have any concerns or start to feel upset, just tell me and we will take a break or stop the interview. There are no direct benefits to participating. Your answer may help us in future programming and treatment for girls in the justice system.

Confidentiality
The information that you give will be handled confidentiality. To help protect your privacy, we have obtained a Federal Certificate of Confidentiality from the Department of Health and Human Services. With this Certificate, the investigators cannot be forced, even by court subpoena, to disclose information for any federal, state, or local proceedings. Disclosure will be necessary, however, upon request to the Department of Health and Human Services for purposes of an audit or evaluation.

You should understand that a Confidentiality Certificate does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. Note however, that if an insurer or employer learns about your participation and obtains your consent to receive research information, then the investigator may not use the Certificate to withhold this information. This means that you and your family must also actively protect your own privacy.

Information will be kept confidential. However, if we learn about harm to you or others, we may need to take steps to protect you and other people even if it requires telling the authorities without your permission.

Your responses are confidential. Answers will be available only to the researchers. Your survey will be given a code in place of a name and will be maintained in a locked filing cabinet in a locked research office. Only members of the research team will have access to your answers. Your name will not be used in any report. All answers will be summarized so no one will know your individual answers. If you withdraw from the study, your information will be destroyed.

Voluntary Participation & Withdrawal
Your participation in the study is completely voluntary and you have the right to withdraw from the study at any time without penalty.

Payment
We will pay your $50 if you are living in the community. If you are in an institution, we will pay you, only if allowed by your institution.

Questions about the Study
You may talk to the interviewer if you have any questions now or at any point during the interview or contact N. Dickon Reppucci or Preeti Chauhan, Department of Psychology, PO Box 400400, University of Virginia, Charlottesville, VA 22903 (434)982-5052.

Questions about your Rights
If you have any questions about your rights as a research participant, please contact the University of Virginia Institution Review Board for Social and Behavioral Sciences at (434) 924-5999.

Please check the box below and sign your name if you wish to participate in this research being conducted.

☐ I AGREE to participate in this study.

_____
Printed Name of Participant

_____ _____
Signature of Participant Date

_____ _____
Witness (Required in DOC) Date

VOLUNTARY INFORMED CONSENT FOR THE SCHOOL RECRODS

In addition to the information we attain during the interview, we would also like your permission to take written notes from your school records. This information will include your grades, your achievement test scores, your attendance information, any disciplinary information available including suspensions and expulsions and whether you were promoted or retained. If you have a confidential folder, we would like to take written notes about what type of special education services you have been receiving through the school (e.g., resource class, academically gifted, self-contained class, etc.), when you qualified for them, and the amount of services you received. We would like to collect the school records information from any school facility you attended, whether it is regular school or residential facility, detention or training school.

We will take the information we collect about you and place it in our files. The same confidentiality issues apply as those stated above. This means that the information we have about you is protected. No one can use the courts to get the information from us.

If you agree to allow the UVA Girls Study to have access to this information please sign in the space provided below. This consent is valid until one year from the date below. If you choose to withdraw from the study, permission to access school records will end at the same time.

If you have any questions about your rights as a research participant, please contact the University of Virginia Institution Review Board for Social and Behavioral Sciences at (434) 924-5999.

My name is: (Print) _____

School I will be attending in 05-06**:** _____

If not currently enrolled in school, name of last school attended:_____

APPENDIX B: SELECTED MEASURES

Table 30. Selected Measures by Domain

A. Neighborhood Variables	➢ Neighborhood Disadvantage ➢ Gini Index – Income Inequality
B. Violence Exposure	➢ Conflict Tactics Scale – Revised ➢ Community Violence Measure
C. Covariates	➢ Maternal Risk
D. Antisocial Behavior	➢ Self Report of Offending – Revised

A. Neighborhood Disadvantage

P Denotes the Table from the Census Data

- Percentage of African Americans (P6 – Black Americans/P1 – Total Population)
- Percentage of Female Headed Household (P9 – Female Householder/Householder)
- Percentage of People Unemployed (P43.- ((Male Civilians Unemployed in Labor Force + Female Civilians Unemployed in Labor Force)/ (Males in Labor Forece + Females in Labor Force)
- Percentage of Households on Public Assistance (P64 – With Public Assistance Incomes/Total Households)
- Percentage of People Below the Poverty Line (P87 - Income in 1999 Below the Poverty/Total People)
- 3 tables to establish a vector of household income for the Gini Index
    - P52 – Household Income
    - P53 – Median Household Income
    - P54 – Aggregate Household Income

B1. Conflict Tactics Scale- Revised, Victimization Subscale

Instructions: Parents, friends, and romantic partners may act towards you in many ways. You may also act in a number of different ways towards your parents, friends, and romantic partners. Sometimes they may do things that are helpful and sometimes they may do things that are hurtful. Likewise, sometimes you may do things that are helpful and hurtful. This questionnaire asks how often these things may have happened in the past 6 months. Some of these questions may make you feel uncomfortable or remind you of unpleasant things but please be as honest as you can.

Response Categories:
Never (1)
Rarely (2)
Often (3)
Always (4)

Perpetrator: Friend, Mother, Father, Romantic Partner,

Items:

- Pushing, grabbing, or shoving in an argument.
- Threw something.
- Slapped.
- Kicked, bit, or hit with a fist.
- Hit with an object.

B2. Community Violence Measures

Instructions: How often do you see people?

Response Categories:
Never (0)
Sometimes (1)
Always (2)

Context:

- At home.
- In my school.
- In my neighborhood.

Items:

- Someone getting beat up?
- Somebody getting stabbed or shot?
- Guns?
- Guns being shot?
- Somebody getting arrested?
- Gang activity?

C. Maternal Risk Questions

Instructions: To the best of your knowledge, has your mother ever:

Response Categories:
No (0)
Yes (1)
Don't Know (2)

Items:

- Been arrested or convicted of a crime.
- Ever had a problem with alcohol use.
- Ever had a problem with drug use.

D. Self Report of Offending- Revised

Instructions: Now I am going to ask you some questions about certain activities that you may have been involved in. Have you ever (for Wave I) and since the last time we talked to you (Wave II)?

Response Categories:
No (0)
Yes (1)

Violent Behavior Items:

- Carried a gun?
- Used a weapon to get money or things from people?
- Used a weapon (stick, knife, gun, rocks) while fighting with another person?
- Participated in gang activity
- Been in a fistfight
- Attacked someone with the idea of seriously hurting or killing that person?
- Shot at someone?

Delinquent Behavior Items

- Driven while drunk or high?
- Sold marijuana, pot, or hashish?
- Sold hard drugs (other than pot), such as heroin, cocaine, acid or others?
- Broken or tried to break into a building, or vehicle to steal something?
- Stolen or tried to steal a motor vehicle such as a car or a motorcycle to keep or sell?
- Been paid to have sexual relations with someone?

APPENDIX C: REARREST CATEGORY BREAKDOWN

- Violent Offenses
  - First or Second Degree Murder
  - Assault and Battery
  - Simple Assault against Family Member
  - Occupied Dwelling/Church, Aid, or Produce Burning
  - Stab, Cut, Wounded Someone without Malicious Intent
  - Stab, Cut, Wounded Someone with Malicious Intent
  - Hate Crime: Simple Assault
  - Simple Assault
  - Victim Injured: Driver Failed to Stop, Report, or Assist
  - Simple Assault on Law Enforcement, Judge, DOC, Fire/Rescue Personnel
  - Robbery

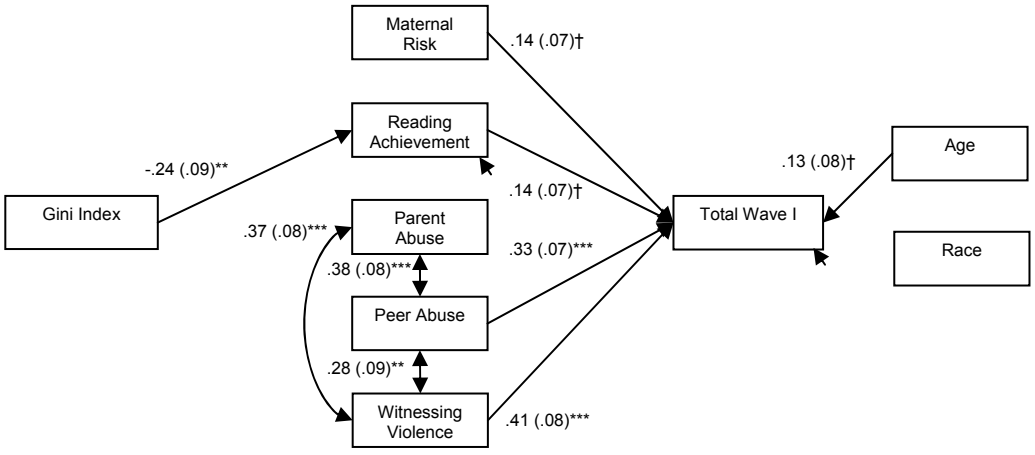
- Non-Violent Offenses
  - Unauthorized Use of Animal, Auto, Boat Worth
  - Shoplifted, Altered Price Tags
  - Receive Stolen Goods
  - Destruction of Property or Monument
  - Identity Fraud
  - Breaking and Entering
  - Grand Larceny
  - Petit Larceny
  - Auto Theft
  - Drug Distribution
  - Drug Possession
  - Trespassing
  - Conspiracy to Commit Felony
  - DWI
  - Disorderly Conduct
  - Abusive, Profane, Threatening Calls on Phone
  - Refusal to Aid Officer
  - Possession, Consumption, or Purchasing Alcohol Under 21
  - Driving without License
  - Remain on School/Church Property, Bus after being Forbidden to do so
  - Use of Firearms in Commission of a Felony
  - Drug Possession with Intent to Sell, Distribute
  - DWI and Refusing to Take Breathalyzer
  - Resisting Arrest, Obstructing Justice without Threats or Force
  - Fails to Stop Police, Attempt to Escape or Elude
  - Endanger Life or Limb
  - Convicted Felon: (non-violent within 10 years) Possession or Transportation of Firearms
  - Possess Schedule Drug while Possessing Firearm
  - Possess Handgun or Assault Rifle Under 18
  - Discharge Firearm into Unoccupied Building

APPENDIX D: GINI INDEX STRUCTURAL MODELS

Table 31. Fit Statistics using the Gini Index for Wave I Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	33.53		17			0.83	0.09	0.08	.42
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	33.53	0.00	18	1	No	0.84	0.08	0.08	.42
Model 3. Reading Achievement	**39.54**	**6.01**	**18**	**1**	**Yes**	**0.78**	**0.10**	**0.09**	**.42**
Model 4. Parental Abuse	33.77	0.24	18	1	No	0.84	0.09	0.08	.42
Model 5. Peer Abuse	34.12	0.59	18	1	No	0.84	0.09	0.08	.42
Model 6. Witnessing Violence	34.20	0.67	18	1	No	0.84	0.08	0.08	.42
Predictors to Wave I Offending - Total									
Model 7. Maternal Risk	36.55	3.02	18	1	No	0.81	0.09	0.08	.42
Model 8. Reading Achievement	36.23	2.70	18	1	No	0.81	0.09	0.08	.41
Model 9. Parental Abuse	33.70	0.17	18	1	No	0.84	0.09	0.08	.42
Model 10. Peer Abuse	**50.49**	**19.96**	**18**	**1**	**Yes**	**0.67**	**0.12**	**0.09**	**.33**
Model 11. Witnessing Violence	**54.73**	**21.20**	**18**	**1**	**Yes**	**0.62**	**0.13**	**0.09**	**.28**
Model 12. Gini Index	33.54	0.01	18	1	No	0.84	0.08	0.08	.42
Model 13. Age	35.82	2.29	18	1	No	0.82	0.09	0.08	.39
Model 14. Race (0 = White; 1= Black)	34.57	1.04	18	1	No	0.83	0.09	0.08	.42
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	49.34	15.81	18	1	Yes	0.68	0.12	0.10	.40
Model 16.Parent Abuse with Witnessing Violence	48.79	15.26	18	1	Yes	0.68	0.12	0.10	.40
Model 17.Peer Abuse with Witnessing Violence	41.34	7.81	18	1	No	0.76	0.10	0.09	.38
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 6, 9, 12 and 14	**35.66**	**2.13**	**24**	**6**	**No**	**0.88**	**0.06**	**0.09**	**.41**
Model 19. Model 18 plus 13,	38.50	4.94	25	7	No	0.86	0.07	0.08	.38
Model 20. Model 18 plus 7, 8, and 13,	45.74	12.21	27	10	No	0.81	0.08	0.09	.35

Figure 23 Best Fitting Model using the Gini Index for Wave I Offending - Total Antisocial Behavior

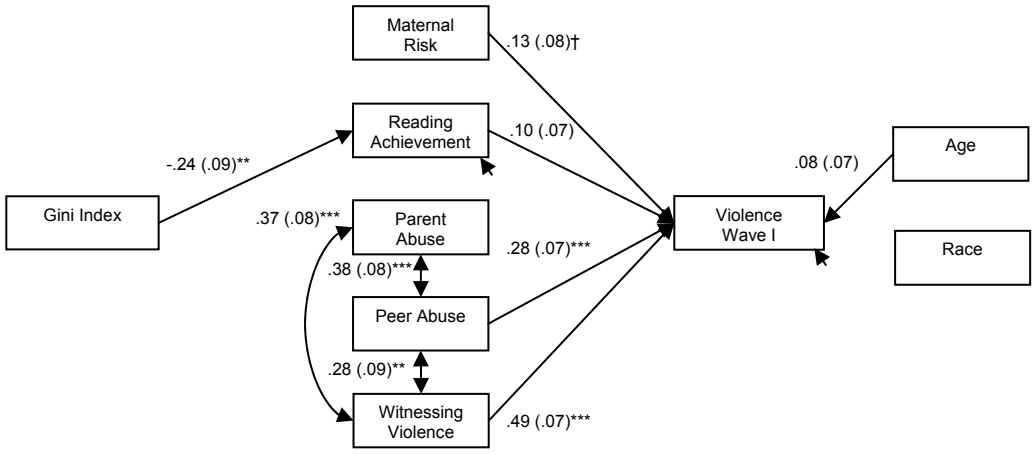


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=35.66; df = 24; CFI = 0.88; RMSEA = 0.06; SRMR = 0.08; r^2 = .41.

Table 32. Fit Statistics using the Gini Index for Wave I Offending – Violent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	33.39		17			0.84	0.09	0.08	.43
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	33.39	0.00	18	1	No	0.85	0.08	0.08	.43
Model 3. Reading Achievement	39.27	5.88	18	1	Yes	0.79	0.10	0.09	.43
Model 4. Parental Abuse	33.60	0.21	18	1	No	0.84	0.08	0.08	.43
Model 5. Peer Abuse	33.89	0.50	18	1	No	0.84	0.09	0.08	.43
Model 6. Witnessing Violence	34.04	0.65	18	1	No	0.84	0.09	0.08	.42
Predictors to Wave I Offending - Violence									
Model 7. Maternal Risk	36.08	2.69	18	1	No	0.82	0.09	0.08	.43
Model 8. Reading Achievement	34.80	1.41	18	1	No	0.83	0.09	0.08	.42
Model 9. Parental Abuse	33.59	0.20	18	1	No	0.84	0.08	0.08	.43
Model 10. Peer Abuse	43.81	10.42	18	1	Yes	0.74	0.10	0.09	.38
Model 11. Witnessing Violence	60.65	27.29	18	1	Yes	0.57	0.14	0.09	.25
Model 12. Gini Index	33.42	0.03	18	1	No	0.85	0.08	0.08	.43
Model 13. Age	34.46	1.07	18	1	No	0.84	0.09	0.08	.41
Model 14. Race (0 = White; 1 = Black)	33.46	0.07	18	1	No	0.85	0.08	0.08	.43
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	49.11	15.72	18	1	No	0.70	0.12	0.10	.40
Model 16.Parent Abuse with Witnessing Violence	48.54	15.15	18	1	No	0.69	0.12	0.10	.40
Model 17.Peer Abuse with Witnessing Violence	41.38	7.99	18	1	No	0.77	0.10	0.09	.39
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 6, 9, 12, and 14	**34.63**	**1.24**	**24**	**7**	**No**	**0.89**	**0.06**	**0.08**	**.42**
Model 19. Model 18 plus 13	35.69	2.30	25	8	No	0.89	0.06	0.08	.41
Model 20. Model 18 minus 6 plus 8,	36.48	3.09	25	8	No	0.89	0.06	0.08	.41
Model 21. Model 18 plus 7, 8, and 13	40.65	7.26	27	10	No	0.86	0.06	0.08	.40

Figure 24. Best Fitting Model using the Gini Index for Wave I Offending – Violent Behavior

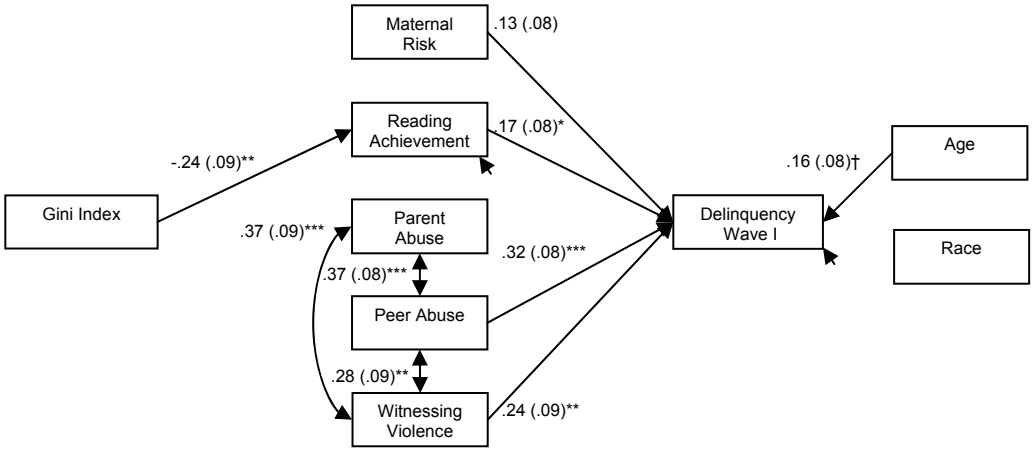


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=34.63; df = 24; CFI = 0.89; RMSEA = 0.06; SRMR = 0.08; r^2 = .42.

Table 33. Fit Statistics using the Gini Index for Wave I Offending – Delinquent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	33.66		17			0.79	0.09	0.08	.29
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	33.67	0.01	18	1	No	0.80	0.08	0.08	.29
Model 3. Reading Achievement	**39.83**	**6.17**	**18**	**1**	**Yes**	**0.72**	**0.10**	**0.09**	**.29**
Model 4. Parental Abuse	33.89	0.23	18	1	No	0.80	0.09	0.08	.29
Model 5. Peer Abuse	34.25	0.59	18	1	No	0.79	0.09	0.08	.29
Model 6. Witnessing Violence	34.19	0.53	18	1	No	0.79	0.09	0.08	.29
Predictors to Wave I Offending - Delinquency									
Model 7. Maternal Risk	35.73	2.07	18	1	No	0.77	0.09	0.08	.30
Model 8. Reading Achievement	36.74	3.08	18	1	No	0.76	0.09	0.08	.27
Model 9. Parental Abuse	34.94	1.28	18	1	No	0.78	0.09	0.08	.29
Model 10. Peer Abuse	**49.17**	**15.51**	**18**	**1**	**Yes**	**0.60**	**0.12**	**0.09**	**.20**
Model 11. Witnessing Violence	**41.09**	**7.43**	**18**	**1**	**Yes**	**0.70**	**0.10**	**0.08**	**.24**
Model 12. Gini Index	33.77	0.11	18	1	No	0.80	0.09	0.08	.29
Model 13. Age	36.05	2.39	18	1	No	0.77	0.09	0.08	.27
Model 14. Race (0 = White; 1 = Black)	36.04	2.38	18	1	No	0.77	0.09	0.08	.28
Correlations among Violence Exposure									
Model 15.Parent Abuse with Peer Abuse	49.49	15.83	18	1	Yes	0.60	0.12	0.09	.29
Model 16.Parent Abuse with Witnessing Violence	48.68	15.02	18	1	Yes	0.61	0.12	0.09	.29
Model 17.Peer Abuse with Witnessing Violence	41.58	7.92	18	1	Yes	0.70	0.10	0.09	.27
Combining Models for Parsimony									
Model 18. Models 2, 4, 5, 6, 9, and 12	35.88	2.22	23	6	No	0.83	0.07	0.08	.28
Model 19. Model 18 plus 14	**37.90**	**4.24**	**24**	**7**	**No**	**0.82**	**0.07**	**0.08**	**.27**
Model 20. Model 18 plus 7 and 14	40.13	6.47	25	8	No	0.81	0.07	0.08	.27
Model 21. Model 18 plus 7, 8, 13, and 14	48.66	15.00	27	10	No	0.72	0.08	0.08	.19

Figure 25. Best Fitting Model using the Gini Index for Wave I Offending – Delinquent Behavior

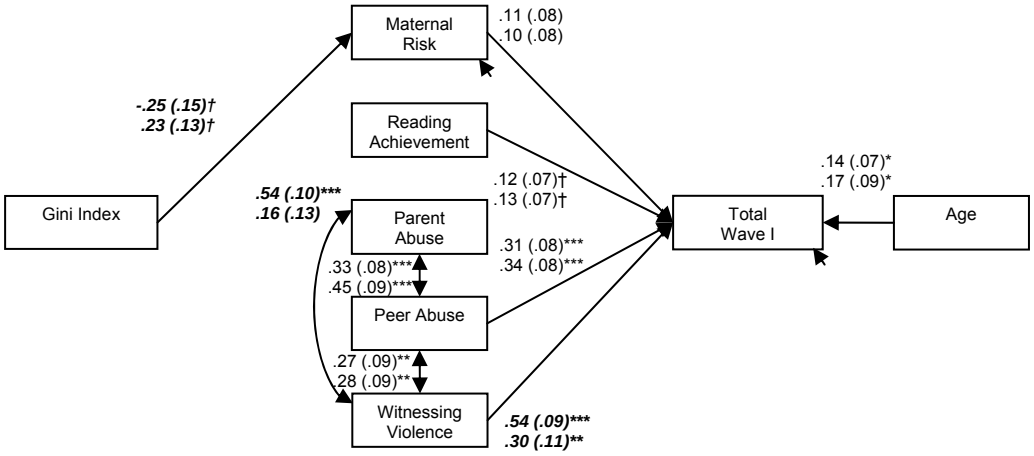


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=37.90; df = 24; CFI = 0.82; RMSEA = 0.07; SRMR = 0.08; r^2 = .27.

Table 34. Fit Statistics using the Gini Index for Race Specific Analyses Wave I Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	37.34		24			0.87	0.10	0.09	.54	.35
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**42.23**	**4.89**	**25**	**1**	**Yes**	**0.83**	**0.11**	**0.10**	**.54**	**.36**
Model 3. Reading Achievement	37.99	0.65	25	1	No	0.87	0.09	0.09	.54	.35
Model 4. Parental Abuse	38.62	1.28	25	1	No	0.86	0.09	0.10	.55	.35
Model 5. Peer Abuse	37.53	0.19	25	1	No	0.88	0.09	0.09	.54	.35
Model 6. Witnessing Violence	37.83	0.49	25	1	No	0.87	0.09	0.09	.54	.35
Predictors to Wave I Offending –Total										
Model 7. Maternal Risk	38.47	1.13	25	1	No	0.87	0.09	0.09	.54	.34
Model 8. Reading Achievement	37.38	0.04	25	1	No	0.88	0.09	0.09	.54	.34
Model 9. Parental Abuse	37.60	0.26	25	1	No	0.87	0.09	0.09	.54	.35
Model 10. Peer Abuse	37.45	0.11	25	1	No	0.88	0.09	0.09	.53	.36
Model 11. Witnessing Violence	40.96	3.62	25	1	No	0.84	0.10	0.08	.45	.40
Model 12. Gini Index	37.69	0.35	25	1	No	0.87	0.09	0.09	.53	.35
Model 13. Age	37.92	0.58	25	1	No	0.87	0.09	0.10	.56	.34
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	37.48	0.14	25	1	No	0.87	0.09	0.09	.53	.35
Model 15.Parent Abuse with Witnessing Violence	**43.51**	**6.17**	**25**	**1**	**Yes**	**0.81**	**0.11**	**0.11**	**.51**	**.38**
Model 16.Peer Abuse with Witnessing Violence	37.34	0.00	25	1	No	0.88	0.09	0.09	.54	.35
Combining Models for Parsimony										
Model 17. All equal but 2, 11, and 15	44.42	7.08	36	12	No	0.92	0.06	0.10	.54	.32
Model 18. All equal but 2 and 15	48.71	11.37	37	13	No	0.88	0.07	0.10	.43	.40
Model 19. All equal but 15	53.78	16.44	38	14	No	0.84	0.08	0.11	.43	.40
Model 20. All equal	61.03	23.69	39	15	No	0.78	0.10	0.12	.43	.42
Model 21: Model 17 plus 3 – 6@0, 9@0, 12@0	**49.62**	**12.28**	**42**	**18**	**No**	**0.92**	**0.06**	**0.11**	**.53**	**.32**

Figure 26. Best Fitting Model using the Gini Index for Race Specific Analyses – Wave I Offending Total Antisocial Behavior

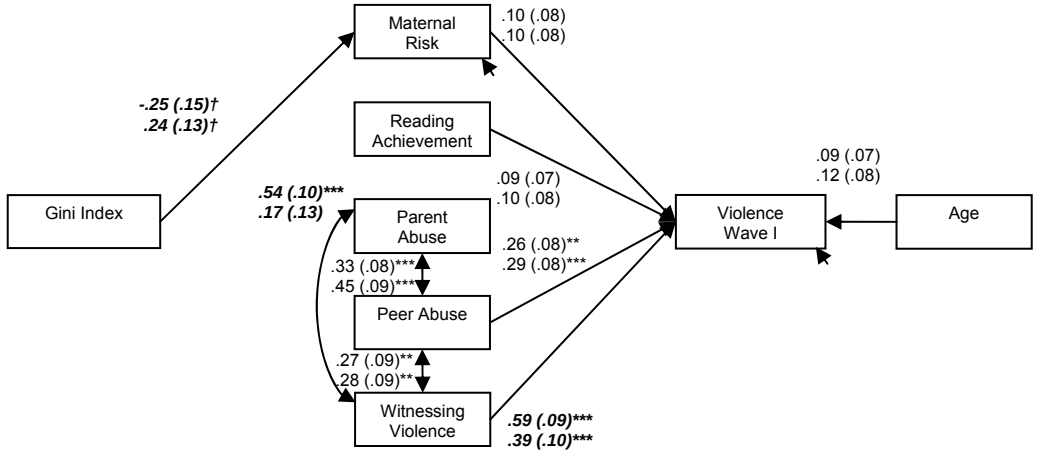


Note. *** p <.00. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=49.62; df = 42; CFI = 0.92; RMSEA = 0.06; SRMR = 0.11; $r^{2\,White}$ = .53; $r^{2\,Black}$ = .32.

Table 35. Fit Statistics using the Gini Index for Race Specific Analyses Wave I Offending – Violent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	36.83		24			0.87	0.09	0.09	.55	.35
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**41.63**	**4.70**	**25**	**1**	**Yes**	**0.83**	**0.10**	**0.10**	**.55**	**.35**
Model 3. Reading Achievement	37.54	0.71	25	1	No	0.88	0.09	0.10	.55	.35
Model 4. Parental Abuse	38.06	1.23	25	1	No	0.87	0.09	0.10	.56	.35
Model 5. Peer Abuse	36.83	0.00	25	1	No	0.88	0.09	0.09	.55	.35
Model 6. Witnessing Violence	37.38	0.55	25	1	No	0.88	0.09	0.10	.55	.35
Predictors to Wave I Offending –Violence										
Model 7. Maternal Risk	37.09	0.26	25	1	No	0.88	0.09	0.09	.55	.35
Model 8. Reading Achievement	37.63	0.80	25	1	No	0.87	0.09	0.10	.56	.34
Model 9. Parental Abuse	37.45	0.62	25	1	No	0.88	0.09	0.10	.55	.34
Model 10. Peer Abuse	37.03	0.20	25	1	No	0.88	0.09	0.10	.55	.36
Model 11. Witnessing Violence	40.20	3.37	25	1	No	0.85	0.10	0.10	.45	.41
Model 12. Gini Index	37.40	0.57	25	1	No	0.88	0.09	0.09	.54	.35
Model 13. Age	36.83	0.00	25	1	No	0.88	0.09	0.10	.55	.35
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	36.97	0.14	25	1	No	0.88	0.09	0.10	.55	.35
Model 15.Parent Abuse with Witnessing Violence	**43.17**	**6.34**	**25**	**1**	**Yes**	**0.82**	**0.11**	**0.11**	**.52**	**.39**
Model 16.Peer Abuse with Witnessing Violence	36.84	0.01	25	1	No	0.88	0.09	0.09	.56	.35
Combining Models for Parsimony										
Model 17. All equal but 2, 11, and 15	43.68	6.85	36	12	No	0.92	0.06	0.10	.54	.34
Model 18. All equal but 2 and 15	46.48	9.65	37	13	No	0.91	0.07	0.10	.45	.41
Model 19. All equal but 15	51.31	14.48	38	14	No	0.87	0.08	0.10	.45	.41
Model 20. All equal	58.84	22.01	39	15	No	0.80	0.09	0.12	.43	.44
Model 21: Model 17 plus 3 – 6@0, 9@0, 12@0	**47.99**	**11.16**	**42**	**18**	**No**	**0.94**	**0.05**	**0.10**	**.53**	**.33**

Figure 27. Best Fitting Model using the Gini Index for Race Specific Analyses – Wave I Offending Violent Behavior

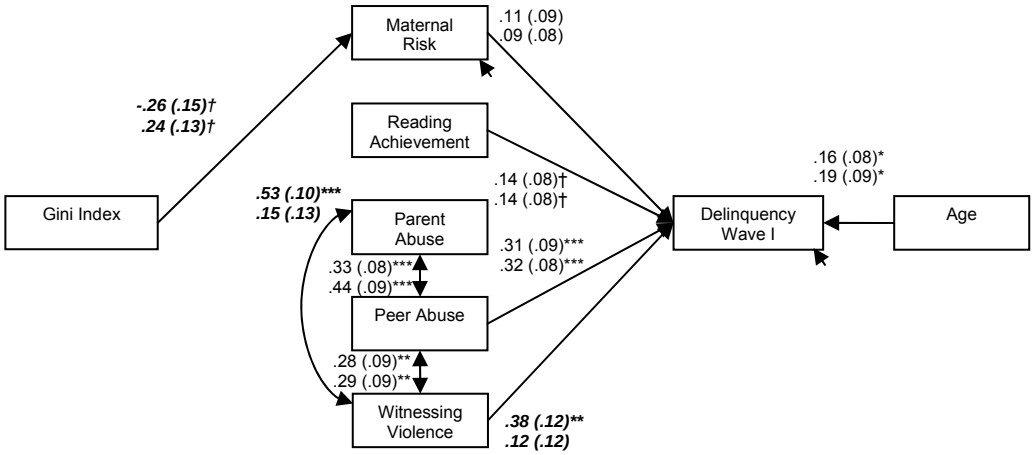


Note. *** p <.00. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=47.99; df = 42; CFI = 0.94; RMSEA = 0.05; SRMR = 0.10; $r^{2\,White}$ = .53; $r^{2\,Black}$ = .33.

Table 36. Fit Statistics using the Gini Index for Race Specific Analyses Wave I Offending – Delinquent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	37.77		24			0.83	0.10	0.09	.38	.26
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**42.66**	**4.89**	**25**	**1**	**Yes**	**0.78**	**0.10**	**0.10**	**.38**	**.27**
Model 3. Reading Achievement	38.43	0.66	25	1	No	0.83	0.09	0.09	.38	.26
Model 4. Parental Abuse	39.10	1.33	25	1	No	0.82	0.10	0.09	.39	.26
Model 5. Peer Abuse	37.80	0.03	25	1	No	0.84	0.09	0.09	.38	.26
Model 6. Witnessing Violence	38.42	0.65	25	1	No	0.83	0.09	0.09	.38	.26
Predictors to Wave 1 Offending –Delinquency										
Model 7. Maternal Risk	39.10	1.33	25	1	No	0.82	0.10	0.09	.37	.24
Model 8. Reading Achievement	38.08	0.31	25	1	No	0.84	0.09	0.09	.37	.27
Model 9. Parental Abuse	37.81	0.04	25	1	No	0.84	0.09	0.09	.38	.26
Model 10. Peer Abuse	37.83	0.06	25	1	No	0.84	0.09	0.09	.37	.27
Model 11. Witnessing Violence	39.92	2.16	25	1	No	0.81	0.10	0.09	.33	.29
Model 12. Gini Index	37.89	0.12	25	1	No	0.84	0.09	0.09	.38	.26
Model 13. Age	39.26	1.49	25	1	No	0.82	0.10	0.10	.42	.24
Correlations among Violence Exposure										
Model 14.Parent Abuse with Peer Abuse	37.88	0.11	25	1	No	0.84	0.09	0.09	.38	.26
Model 15.Parent Abuse with Witnessing Violence	**43.93**	**6.16**	**25**	**1**	**Yes**	**0.76**	**0.11**	**0.11**	**.37**	**.27**
Model 16.Peer Abuse with Witnessing Violence	37.79	0.02	25	1	No	0.84	0.09	0.09	.39	.26
Combining Models for Parsimony										
Model 17. All equal but 2, 11, and 15	45.78	8.01	36	12	No	0.88	0.07	0.10	.39	.22
Model 18. All equal but 2 and 15	49.50	11.73	37	13	No	0.84	0.07	0.10	.28	.27
Model 19. All equal but 15	54.79	17.02	38	14	No	0.79	0.09	0.11	.28	.27
Model 20. All equal	62.37	24.60	39	15	No	0.70	0.10	0.12	.29	.27
Model 21: Model 17 plus 3 – 7@0, 9@0, 12@0	**52.49**	**14.72**	**42**	**18**	**No**	**0.87**	**0.06**	**0.11**	**.36**	**.21**

Figure 28. Best Fitting Model using the Gini Index for Race Specific Analyses – Wave I Offending Delinquent Behavior

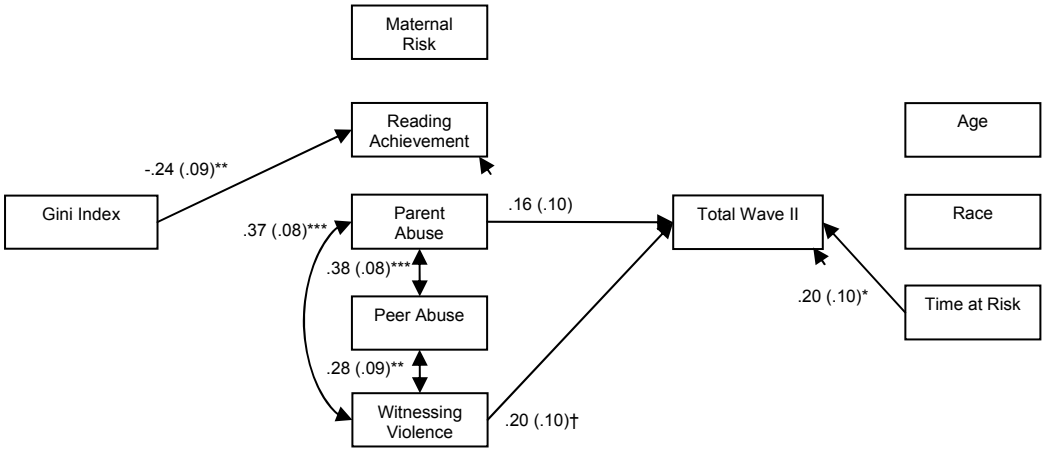


Note. *** p <.00. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=52.49; df = 42; CFI = 0.87; RMSEA = 0.06; SRMR = 0.11; $r^{2\,\text{White}}$ = .36; $r^{2\,\text{Black}}$ = .21.

Table 37. Fit Statistics using the Gini Index for Wave II Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	38.19		22			0.70	0.08	0.07	.14
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	38.19	0.00	23	1	No	0.72	0.07	0.07	.14
Model 3. Reading Achievement	**44.30**	**6.11**	**23**	**1**	**Yes**	**0.61**	**0.09**	**0.08**	**.14**
Model 4. Parental Abuse	38.35	0.16	23	1	No	0.72	0.07	0.07	.14
Model 5. Peer Abuse	38.60	0.41	23	1	No	0.71	0.08	0.07	.14
Model 6. Witnessing Violence	38.50	0.31	23	1	No	0.72	0.07	0.07	.14
Predictors to Wave II Offending - Total									
Model 7. Maternal Risk	39.13	0.94	23	1	No	0.71	0.08	0.07	.13
Model 8. Reading Achievement	38.46	0.27	23	1	No	0.72	0.07	0.07	.13
Model 9. Parental Abuse	39.32	1.13	23	1	No	0.70	0.08	0.07	.14
Model 10. Peer Abuse	38.52	0.33	23	1	No	0.72	0.07	0.07	.13
Model 11. Witnessing Violence	40.23	2.04	23	1	No	0.69	0.08	0.07	.13
Model 12. Gini Index	38.26	0.07	23	1	No	0.72	0.07	0.07	.14
Model 13. Age	39.30	1.11	23	1	No	0.70	0.08	0.07	.14
Model 14. Race (0 = White; 1 = Black)	38.23	0.04	23	1	No	0.72	0.07	0.07	.14
Model 15. Time at Risk	**43.60**	**5.41**	**23**	**1**	**Yes**	**0.62**	**0.09**	**0.07**	**.10**
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.16	15.97	23	1	Yes	0.43	0.11	0.09	.13
Model 17.Parent Abuse with Witnessing Violence	52.78	14.59	23	1	Yes	0.46	0.10	0.08	.12
Model 18.Peer Abuse with Witnessing Violence	46.29	8.10	23	1	Yes	0.57	0.09	0.08	.13
Combining Models for Parsimony									
Model 19. Models 2-8, 10, 12, and 14	**41.07**	**2.88**	**32**	**10**	**No**	**0.83**	**0.05**	**0.07**	**.13**
Model 20. Model 19 plus 9	43.52	5.33	33	11	No	0.81	0.05	0.07	.11

Figure 29. Best Fitting Model using the Gini Index for Wave II Offending - Total Antisocial Behavior

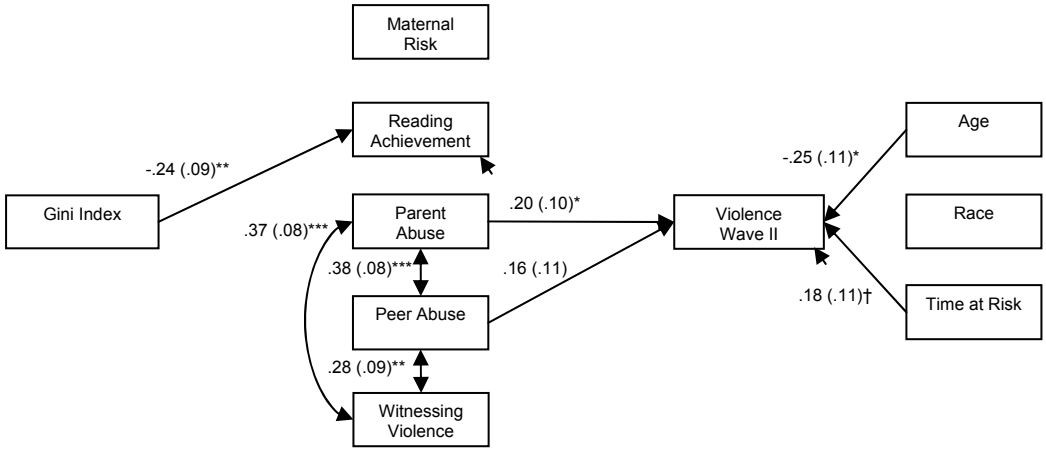


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=41.07; df = 32; CFI = 0.83; RMSEA = 0.05; SRMR = 0.07; r^2 = .13.

Table 38. Fit Statistics using the Gini Index for Wave II Offending – Violent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	38.52		22			0.72	0.08	0.07	.16
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	38.53	0.01	23	1	No	0.74	0.07	0.07	.16
Model 3. Reading Achievement	**44.66**	**6.14**	**23**	**1**	**Yes**	**0.63**	**0.09**	**0.08**	**.16**
Model 4. Parental Abuse	38.67	0.15	23	1	No	0.74	0.08	0.07	.16
Model 5. Peer Abuse	38.92	0.40	23	1	No	0.73	0.08	0.07	.16
Model 6. Witnessing Violence	38.81	0.29	23	1	No	0.73	0.08	0.07	.16
Predictors to Wave II Offending – Violence									
Model 7. Maternal Risk	38.54	0.02	23	1	No	0.74	0.07	0.07	.16
Model 8. Reading Achievement	38.62	0.10	23	1	No	0.74	0.08	0.07	.16
Model 9. Parental Abuse	41.01	2.49	23	1	No	0.70	0.08	0.07	.15
Model 10. Peer Abuse	40.22	1.70	23	1	No	0.71	0.08	0.07	.14
Model 11. Witnessing Violence	39.75	1.23	23	1	No	0.72	0.08	0.07	.15
Model 12. Gini Index	38.57	0.05	23	1	No	0.74	0.07	0.07	.16
Model 13. Age	42.09	3.57	23	1	No	0.68	0.08	0.07	.16
Model 14. Race (0 = White; 1 = Black)	38.82	0.30	23	1	No	0.73	0.08	0.07	.15
Model 15. Time at Risk	40.87	2.35	23	1	Yes	0.70	0.08	0.07	.15
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.43	15.91	23	1	Yes	0.47	0.11	0.09	.14
Model 17.Parent Abuse with Witnessing Violence	53.07	14.55	23	1	Yes	0.49	0.10	0.09	.14
Model 18.Peer Abuse with Witnessing Violence	46.72	8.20	23	1	Yes	0.60	0.09	0.08	.14
Combining Models for Parsimony									
Model 19. Models 2, 4, 5, 6, 7, 8, 12, and 14	39.40	0.88	30	8	No	0.84	0.05	0.07	.16
Model 20. Model 19 plus 11	**40.64**	**2.12**	**31**	**9**	**No**	**0.84**	**0.06**	**0.07**	**.15**
Model 21. Models plus 10, and 11	42.93	4.41	32	10	No	0.82	0.05	0.07	.13

Figure 30. Best Fitting Model using the Gini Index for Wave II Offending - Violent Behavior

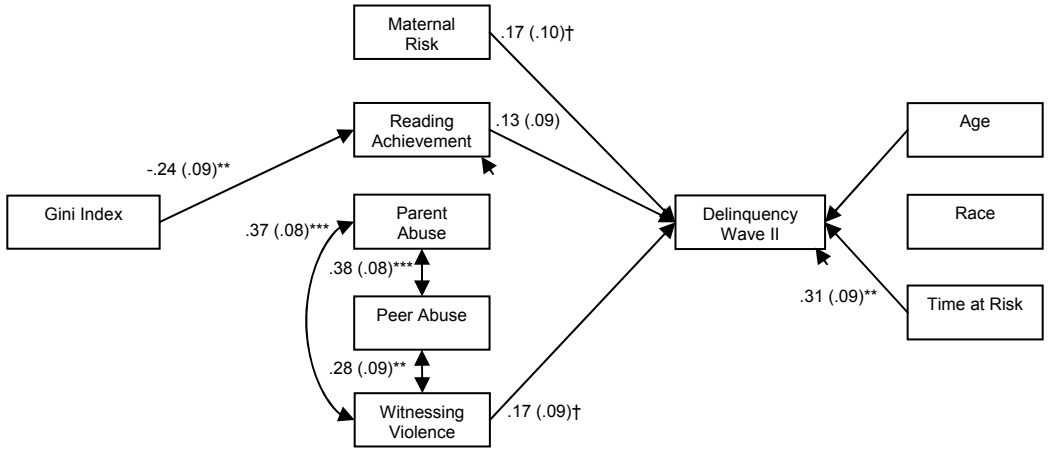


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=40.64; df = 31; CFI = 0.84; RMSEA = 0.06; SRMR = 0.07; r^2 = .15.

Table 39. Fit Statistics using the Gini Index for Wave II Offending – Delinquent Behavior

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2
Model 1. Baseline Model	38.29		22			0.71	0.08	0.07	.19
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	38.31	0.02	23	1	No	0.73	0.07	0.07	.19
Model 3. Reading Achievement	**44.31**	**6.02**	**23**	**1**	**Yes**	**0.62**	**0.09**	**0.08**	**.19**
Model 4. Parental Abuse	38.46	0.17	23	1	No	0.73	0.07	0.07	.19
Model 5. Peer Abuse	38.67	0.38	23	1	No	0.72	0.08	0.07	.19
Model 6. Witnessing Violence	38.62	0.33	23	1	No	0.73	0.08	0.07	.19
Predictors to Wave II Offending – Delinquency									
Model 7. Maternal Risk	40.32	2.03	23	1	No	0.70	0.08	0.07	.19
Model 8. Reading Achievement	40.21	1.92	23	1	No	0.70	0.08	0.07	.16
Model 9. Parental Abuse	38.43	0.14	23	1	No	0.73	0.07	0.07	.19
Model 10. Peer Abuse	38.29	0.00	23	1	No	0.73	0.07	0.07	.19
Model 11. Witnessing Violence	41.66	3.37	23	1	No	0.67	0.08	0.07	.16
Model 12. Gini Index	38.32	0.03	23	1	No	0.73	0.07	0.07	.19
Model 13. Age	39.71	1.42	23	1	No	0.71	0.08	0.07	.17
Model 14. Race (0 = White; 1 = Black)	38.29	0.00	23	1	No	0.73	0.07	0.07	.19
Model 15. Time at Risk	**43.58**	**5.29**	**23**	**1**	**Yes**	**0.64**	**0.09**	**0.07**	**.15**
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.26	15.97	23	1	Yes	0.45	0.11	0.08	.19
Model 17.Parent Abuse with Witnessing Violence	52.89	14.60	23	1	Yes	0.47	0.10	0.08	.19
Model 18.Peer Abuse with Witnessing Violence	46.53	8.24	23	1	Yes	0.59	0.09	0.08	.19
Combining Models for Parsimony									
Model 19. Models 2, 4, 5, 6, 7, 9, 10, 12, and 14	39.01	0.72	30	8	No	0.84	0.05	0.07	.19
Model 20. Model 19 minus 10 plus 11	**40.28**	**1.99**	**31**	**9**	**No**	**0.84**	**0.05**	**0.07**	**.17**

Figure 31. Best Fitting Model using the Gini Index for Wave II Offending - Delinquent Behavior

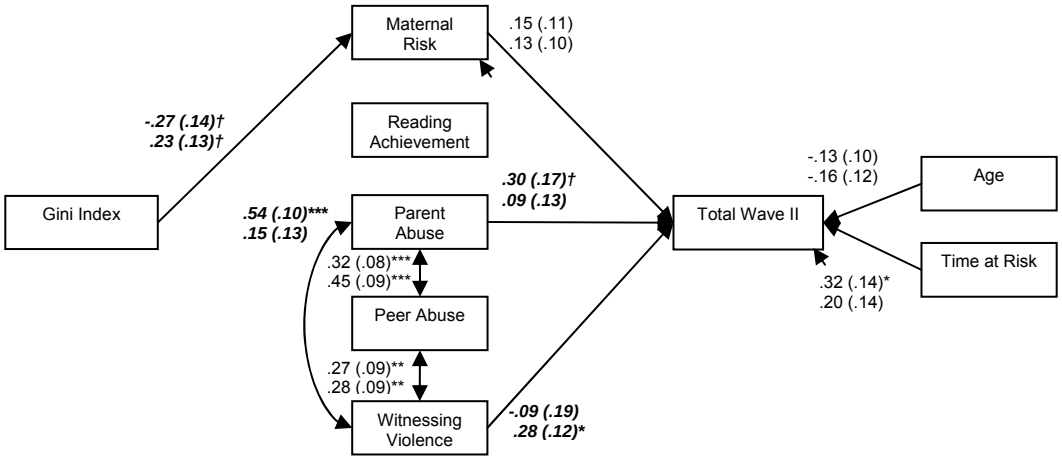


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Model Statistics: X^2=40.28; df = 31; CFI = 0.84; RMSEA = 0.05; SRMR = 0.07; r^2 = .17

Table 40. Fit Statistics using the Gini Index for Race Specific Analyses Wave II Offending – Total Antisocial Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	46.88		34			0.78	0.08	0.10	.23	.19
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**52.26**	**5.38**	**35**	**1**	**Yes**	**0.70**	**0.09**	**0.10**	**.22**	**.19**
Model 3. Reading Achievement	47.31	0.43	35	1	No	0.79	0.08	0.10	.23	.19
Model 4. Parental Abuse	48.14	1.26	35	1	No	0.77	0.08	0.10	.24	.19
Model 5. Peer Abuse	46.88	0.00	35	1	No	0.79	0.08	0.10	.23	.19
Model 6. Witnessing Violence	47.70	0.82	35	1	No	0.78	0.08	0.10	.23	.19
Predictors to Wave II Offending - Total										
Model 7. Maternal Risk	46.91	0.03	35	1	No	0.79	0.08	0.10	.23	.19
Model 8. Reading Achievement	47.46	0.58	35	1	No	0.78	0.08	0.10	.24	.18
Model 9. Parental Abuse	48.10	1.22	35	1	No	0.77	0.08	0.10	.20	.20
Model 10. Peer Abuse	47.12	0.24	35	1	No	0.79	0.08	0.10	.23	.18
Model 11. Witnessing Violence	**50.81**	**3.93**	**35**	**1**	**Yes**	**0.73**	**0.09**	**0.10**	**.19**	**.15**
Model 12. Gini Index	49.31	2.43	35	1	No	0.75	0.08	0.10	.19	.19
Model 13. Age	47.75	0.87	35	1	No	0.78	0.08	0.10	.19	.20
Model 14: Time at Risk	47.73	0.85	35	1	No	0.78	0.08	0.09	.18	20
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	46.92	0.04	35	1	No	0.79	0.08	0.10	.23	.19
Model 16.Parent Abuse with Witnessing Violence	**53.10**	**6.22**	**35**	**1**	**Yes**	**0.69**	**0.09**	**0.11**	**.23**	**.22**
Model 17.Peer Abuse with Witnessing Violence	46.90	0.02	35	1	No	0.79	0.08	0.10	.23	.19
Combining Models for Parsimony										
Model 18. All equal but 2, 11 and 16	56.38	9.50	47	13	No	0.84	0.06	0.10	.11	.19
Model 19. All equal	71.66	24.78	50	16	No	0.62	0.08	0.11	.13	.15
Model 20. All equal but 2, 9, 11, 14, and 16	54.68	7.80	46	12	No	0.83	0.06	0.10	.20	.17
Model 21. Model 20 plus 3-6@0, 10@0, 12@0	**59.31**	**12.25**	**52**	**18**	**No**	**0.87**	**0.05**	**0.10**	**.18**	**.15**

Figure 32. Best Fitting Model using the Gini Index for Wave II Offending - Total Antisocial Behavior

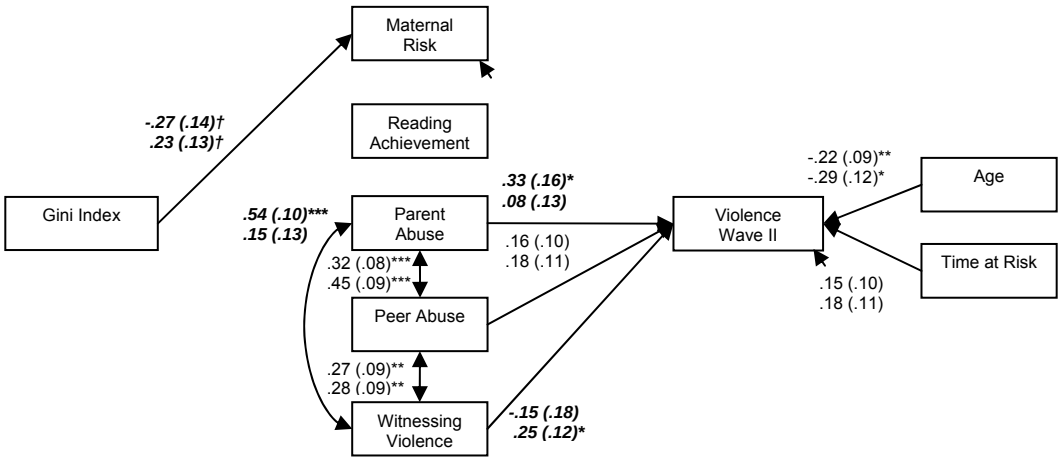


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=59.31; df = 52; CFI = 0.87; RMSEA = 0.05; SRMR = 0.10; $r^{2\ White}$ = .18; $r^{2\ Black}$ = .15

Table 41. Fit Statistics using the Gini Index for Race Specific Analyses Wave II Offending – Violent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	47.34		34			0.79	0.08	0.10	.23	.26
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**52.91**	**5.57**	**35**	**1**	**Yes**	**0.72**	**0.09**	**0.10**	**.23**	**.26**
Model 3. Reading Achievement	47.74	0.40	35	1	No	0.80	0.08	0.10	.24	.26
Model 4. Parental Abuse	48.49	1.15	35	1	No	0.79	0.08	0.10	.25	.27
Model 5. Peer Abuse	47.35	0.01	35	1	No	0.81	0.08	0.10	.23	.26
Model 6. Witnessing Violence	48.27	0.93	35	1	No	0.79	0.08	0.10	.23	.26
Predictors to Wave II Offending - Violence										
Model 7. Maternal Risk	47.40	0.06	35	1	No	0.81	0.08	0.10	.23	.26
Model 8. Reading Achievement	48.53	1.19	35	1	No	0.79	0.08	0.10	.23	.26
Model 9. Parental Abuse	49.19	1.85	35	1	No	0.78	0.08	0.10	.16	.27
Model 10. Peer Abuse	47.57	0.23	35	1	No	0.80	0.08	0.10	.24	.25
Model 11. Witnessing Violence	50.19	2.85	35	1	No	0.76	0.08	0.10	.23	.24
Model 12. Gini Index	49.89	2.56	35	1	No	0.77	0.08	0.10	.19	.26
Model 13. Age	47.47	0.13	35	1	No	0.81	0.08	0.10	.24	.26
Model 14: Time at Risk	47.74	0.14	35	1	No	0.80	0.08	0.10	.23	.27
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	47.36	0.02	35	1	No	0.81	0.08	0.10	.23	.27
Model 16.Parent Abuse with Witnessing Violence	**53.56**	**6.22**	**35**	**1**	**Yes**	**0.71**	**0.09**	**0.11**	**.23**	**.29**
Model 17.Peer Abuse with Witnessing Violence	47.36	0.02	35	1	No	0.81	0.08	0.10	.24	.26
Combining Models for Parsimony										
Model 18. All equal but 2 and 16	60.37	13.03	48	14	No	0.81	0.07	0.10	.15	.18
Model 19. All equal but 16	65.63	18.29	49	15	No	0.74	0.08	0.11	.15	.18
Model 20. All equal	73.54	26.20	50	16	No	0.63	0.09	0.11	.14	.19
Model 21. All equal but 2, 9, 11, and 16	57.07	9.73	46	12	No	0.83	0.06	0.10	.17	.22
Model 22. Model 21 plus 3 – 8@0, 12@0	**60.82**	**13.48**	**53**	**19**	**No**	**0.88**	**0.05**	**0.11**	**.18**	**.22**

Figure 33. Best Fitting Model using the Gini Index for Wave II Offending - Violent Behavior

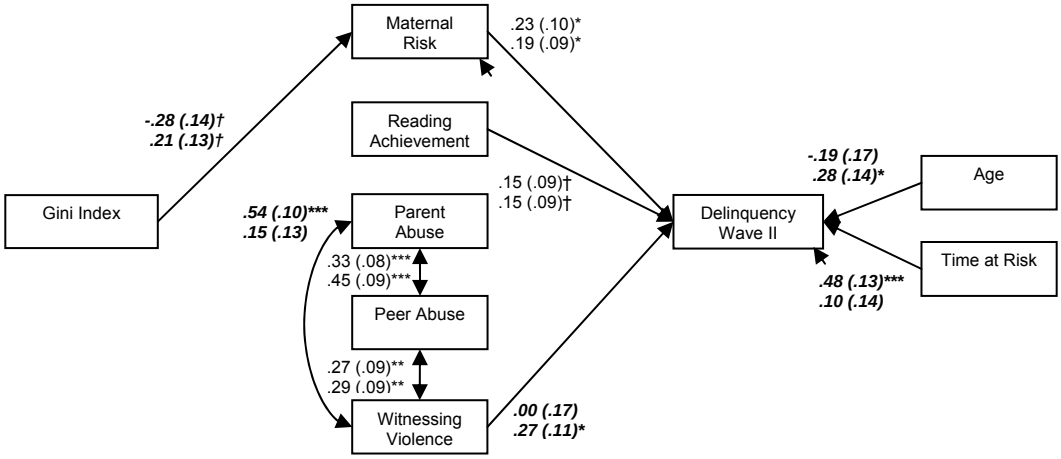


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=60.82; df = 53; CFI = 0.88; RMSEA = 0.05; SRMR = 0.11; $r^{2\,\text{White}}$ = .18; $r^{2\,\text{Black}}$ = .22.

Table 42. Fit Statistics using the Gini Index for Race Specific Analyses Wave II Offending – Delinquent Behavior

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	SRMR	r^2 White	r^2 Black
Model 1. Baseline Model	47.54		34			0.78	0.08	0.10	.30	.24
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**52.48**	**4.94**	**35**	**1**	**Yes**	**0.72**	**0.09**	**0.10**	**.29**	**.24**
Model 3. Reading Achievement	48.07	0.53	35	1	No	0.79	0.08	0.10	.29	.24
Model 4. Parental Abuse	48.95	1.41	35	1	No	0.77	0.08	0.10	.30	.24
Model 5. Peer Abuse	47.54	0.00	35	1	No	0.80	0.08	0.10	.30	.24
Model 6. Witnessing Violence	48.19	0.65	35	1	No	0.79	0.08	0.10	.30	.24
Predictors to Wave II Offending - Delinquency										
Model 7. Maternal Risk	47.62	0.08	35	1	No	0.79	0.08	0.10	.28	.24
Model 8. Reading Achievement	47.54	0.00	35	1	No	0.80	0.08	0.10	.30	.24
Model 9. Parental Abuse	48.02	0.48	35	1	No	0.79	0.08	0.10	.29	.24
Model 10. Peer Abuse	47.59	0.05	35	1	No	0.80	0.08	0.10	.30	.24
Model 11. Witnessing Violence	50.54	3.00	35	1	No	0.75	0.09	0.10	.29	.20
Model 12. Gini Index	48.76	1.22	35	1	No	0.78	0.08	0.10	.29	.24
Model 13. Age	**52.23**	**4.69**	**35**	**1**	**Yes**	**0.72**	**0.09**	**0.10**	**.28**	**.19**
Model 14: Time at Risk	51.17	3.63	35	1	No	0.74	0.09	0.10	.16	.26
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	47.60	0.06	35	1	No	0.80	0.08	0.10	.30	.24
Model 16.Parent Abuse with Witnessing Violence	**53.77**	**6.23**	**35**	**1**	**Yes**	**0.69**	**0.09**	**0.11**	**.30**	**.25**
Model 17.Peer Abuse with Witnessing Violence	47.57	0.03	35	1	No	0.80	0.08	0.10	.30	.24
Combining Models for Parsimony										
Model 18. All equal but 2, 13, and 16	59.01	11.47	47	13	No	0.80	0.07	0.10	.15	.22
Model 19. All equal but 2, 13, 14, and 16	55.92	8.38	46	12	No	0.84	0.06	0.10	.27	.20
Model 20. All equal but 2, 11, 13, 14, and 16	53.78	6.24	45	11	No	0.86	0.06	0.10	.27	.25
Model 21. Model 20 plus 3 – 6@0, 9-10@0	57.79	10.52	51	17	No	0.89	0.05	0.10	.26	.24

Figure 34. Best Fitting Model using the Gini Index for Wave II Offending – Delinquent Behavior

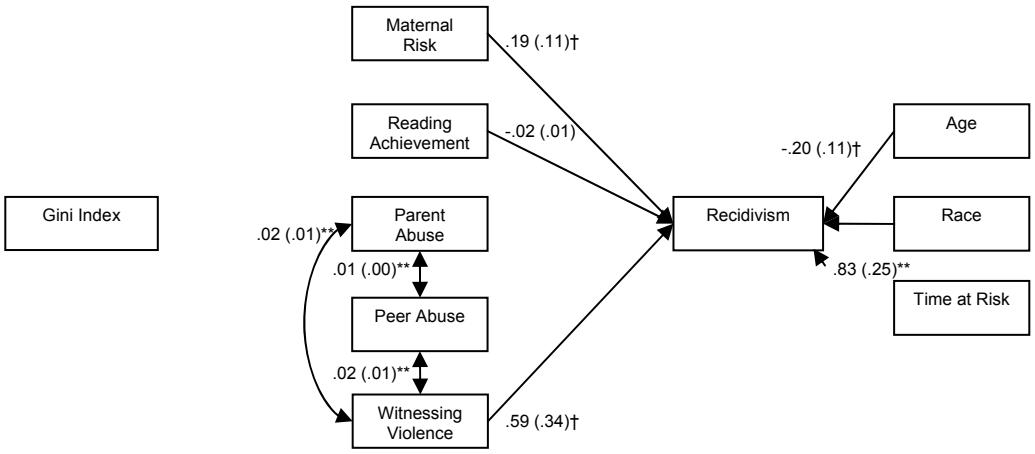


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Standardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=57.79; df = 51; CFI = 0.8; RMSEA = 0.05; SRMR = 0.10; $r^{2\ White}$ = .26; $r^{2\ Black}$ = .24

Table 43. Fit Statistics using the Gini Index for General Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	49.26		18			0.25	0.13	1.13	.31
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	50.03	0.15	19	1	No	0.26	0.12	1.13	.31
Model 3. Reading Achievement	50.69	1.35	19	1	No	0.24	0.12	1.14	.31
Model 4. Parental Abuse	50.07	0.17	19	1	No	0.26	0.12	1.13	.31
Model 5. Peer Abuse	50.01	0.08	19	1	No	0.26	0.12	1.13	.31
Model 6. Witnessing Violence	49.02	2.17	19	1	No	0.26	0.12	1.15	.31
Predictors to Recidivism									
Model 7. Maternal Risk	51.82	2.48	19	1	No	0.22	0.12	1.15	.28
Model 8. Reading Achievement	48.72	1.87	19	1	No	0.27	0.12	1.15	.29
Model 9. Parental Abuse	48.11	0.02	19	1	No	0.28	0.12	1.13	.31
Model 10. Peer Abuse	48.04	0.28	19	1	No	0.28	0.12	1.13	.30
Model 11. Witnessing Violence	49.74	3.59	18	1	No	0.24	0.13	1.16	.27
Model 12. Gini Index	48.03	0.40	18	1	No	0.28	0.12	1.14	.31
Model 13. Age	49.48	3.06	18	1	No	0.25	0.13	1.16	.28
Model 14. Race (0 = White; 1 = Black)	**54.75**	**10.91**	**18**	**1**	**Yes**	**0.12**	**0.14**	**1.22**	**.19**
Model 15. Time at Risk	50.89	1.18	19	1	No	0.24	0.12	1.14	.31
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.95	11.21	18	1	Yes	0.12	0.14	1.22	.31
Model 17.Parent Abuse with Witnessing Violence	54.72	11.77	18	1	Yes	0.12	0.14	1,21	.32
Model 18.Peer Abuse with Witnessing Violence	53.20	8.68	18	1	Yes	0.16	0.13	1.20	.31
Combining Models for Parsimony									
Model 19. Models 2, 4-5, 9-10, 12, and 15	51.20	1.94	23	7	No	0.35	0.11	1.15	.30

Figure 35. Best Fitting Model using the Gini Index for General Recidivism

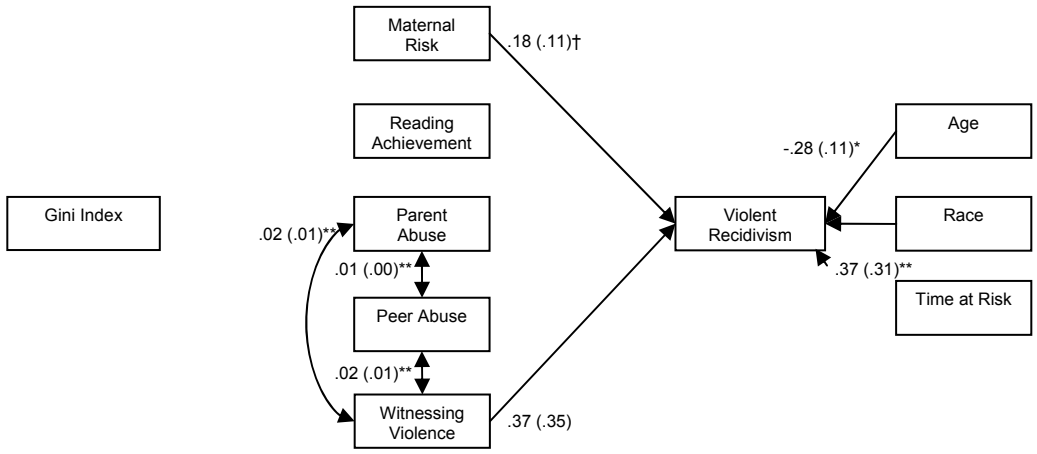


Note. *** p <.001; ** p <.01; * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=51.20; df = 23; CFI = 0.35; RMSEA = 0.11; WRMR = 1.15; r^2 = .30

Table 44. Fit Statistics using the Gini Index for Violent Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	49.26		18			0.12	0.13	1.13	.22
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	50.03	0.15	19	1	No	0.13	0.12	1.13	.22
Model 3. Reading Achievement	50.69	1.35	19	1	No	0.11	0.12	1.14	.22
Model 4. Parental Abuse	50.07	0.17	19	1	No	0.13	0.12	1.13	.23
Model 5. Peer Abuse	50.01	0.08	19	1	No	0.13	0.12	1.13	.22
Model 6. Witnessing Violence	49.02	2.17	18	1	No	0.13	0.12	1.15	.23
Predictors to Violent Recidivism									
Model 7. Maternal Risk	48.94	2.24	18	1	No	0.13	0.12	1.15	.19
Model 8. Reading Achievement	48.47	0.82	18	1	No	0.14	0.12	1.14	.22
Model 9. Parental Abuse	48.71	0.82	18	1	No	0.14	0.12	1.14	.22
Model 10. Peer Abuse	48.46	0.86	18	1	No	0.14	0.12	1.14	.21
Model 11. Witnessing Violence	48.27	0.92	18	1	No	0.15	0.12	1.14	.22
Model 12. Gini Index	50.35	0.11	19	1	No	0.12	0.12	1.13	.22
Model 13. Age	**51.83**	**6.56**	**18**	**1**	**Yes**	**0.05**	**0.13**	**1.18**	**.13**
Model 14. Race (0 = White; 1 = Black)	48.44	1.52	18	1	No	0.15	0.12	1.15	.20
Model 15. Time at Risk	50.32	0.37	19	1	No	0.12	0.12	1.14	.23
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.95	11.21	18	1	Yes	0.00	0.14	1.22	.22
Model 17.Parent Abuse with Witnessing Violence	54.72	11.77	18	1	Yes	0.00	0.14	1.21	.24
Model 18.Peer Abuse with Witnessing Violence	53.20	8.68	18	1	Yes	0.01	0.13	1.20	.22
Combining Models for Parsimony									
Model 19. Models 2-6, 8-10, 12, and 12	49.93	0.67	23	5	No	0.24	0.10	1.19	.20
Model 20. Model 19 plus 14	51.58	2.42	24	6	No	0.22	0.10	1.20	.17

Figure 36. Best Fitting Model using the Gini Index for Violent Recidivism

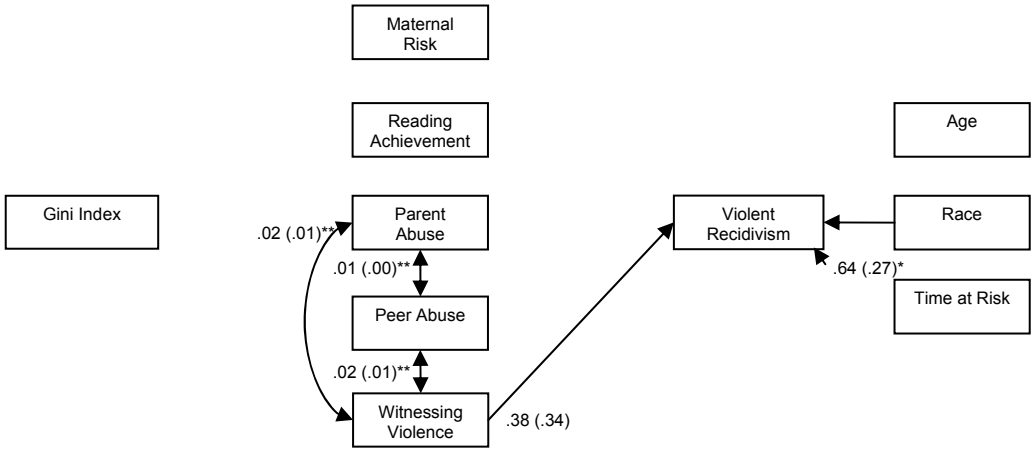


Note. *** p <.001; ** p <.01; * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=49.93; df = 23; CFI = 0.24; RMSEA = 0.10; WRMR = 1.19; r^2 = .20

Table 45. Fit Statistics using the Gini Index for Non-Violent Recidivism

	Goodness-of-Fit Indices								
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2
Model 1. Baseline Model	49.26		18			0.07	0.13	1.13	.14
Setting Each Parameter to 0									
Gini Index to Other Predictors									
Model 2. Maternal Risk	50.03	0.15	19	1	No	0.08	0.12	1.13	.15
Model 3. Reading Achievement	50.69	1.35	19	1	No	0.06	0.12	1.14	.15
Model 4. Parental Abuse	50.07	0.17	19	1	No	0.08	0.12	1.13	.15
Model 5. Peer Abuse	50.01	0.08	19	1	No	0.08	0.12	1.13	.14
Model 6. Witnessing Violence	49.02	2.17	18	1	No	0.08	0.12	1.15	.14
Predictors to Non-Violent Recidivism									
Model 7. Maternal Risk	50.12	0.05	19	1	No	0.08	0.12	1.13	.14
Model 8. Reading Achievement	50.34	0.22	19	1	No	0.07	0.12	1.13	.14
Model 9. Parental Abuse	47.89	0.29	18	1	No	0.11	0.12	1.14	.14
Model 10. Peer Abuse	47.85	0.14	18	1	No	0.11	0.12	1.13	.14
Model 11. Witnessing Violence	48.62	1.58	18	1	No	0.09	0.12	1.14	.12
Model 12. Gini Index	50.77	0.76	19	1	No	0.06	0.12	1.14	.13
Model 13. Age	47.49	0.11	18	1	No	0.12	0.12	1.13	.14
Model 14. Race (0 = White; 1 = Black)	**54.08**	**5.67**	**19**	**1**	**Yes**	**0.00**	**0.13**	**1.18**	**.06**
Model 15. Time at Risk	50.27	0.30	19	1	No	0.07	0.12	1.14	.14
Correlations among Violence Exposure									
Model 16.Parent Abuse with Peer Abuse	54.95	11.21	18	1	Yes	0.00	0.14	1.22	.14
Model 17.Parent Abuse with Witnessing Violence	54.72	11.77	18	1	Yes	0.00	0.14	1.21	.14
Model 18.Peer Abuse with Witnessing Violence	53.20	8.68	18	1	Yes	0.00	0.13	1.20	.16
Combining Models for Parsimony									
Model 19. Models 2-10, 12-13, and 15	**50.99**	**1.73**	**25**	**7**	**No**	**0.23**	**0.10**	**1.18**	**.11**

Figure 37. Best Fitting Model using the Gini Index for Non-Violent Recidivism

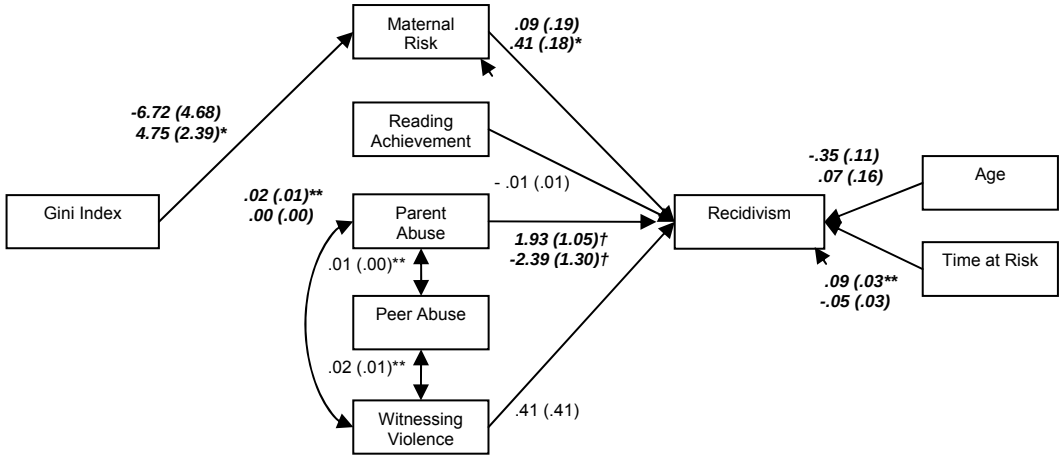


Note. *** p <.001; ** p <.01; * p <.05. † p < .10. Unstandardized coefficients are reported.
Model Statistics: X^2=50.99; df = 25; CFI = 0.23; RMSEA = 0.10; WRMR = 1.18; r^2 = .11

Table 46. Fit Statistics using the Gini Index for Race Specific Analyses for General Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2 White	r^2 Black
Model 1. Baseline Model	27.17		21			0.76	0.08	1.00	.45	.35
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**28.93**	**4.24**	**21**	**1**	**No**	**0.69**	**0.09**	**1.05**	**.45**	**.35**
Model 3. Reading Achievement	26.17	0.48	19	1	No	0.72	0.09	1.03	.45	.35
Model 4. Parental Abuse	27.09	1.17	21	1	No	0.76	0.08	1.01	.45	.35
Model 5. Peer Abuse	27.67	0.04	22	1	No	0.78	0.07	1.00	.45	.35
Model 6. Witnessing Violence	28.42	1.24	22	1	No	0.75	0.08	1.01	.45	.35
Predictors to Recidivism										
Model 7. Maternal Risk	27.07	1.09	21	1	No	0.76	0.08	1.01	.49	.28
Model 8. Reading Achievement	27.67	0.02	22	1	No	0.78	0.07	1.00	.46	.35
Model 9. Parental Abuse	**28.98**	**11.44**	**21**	**1**	**Yes**	**0.69**	**0.09**	**1.04**	**.42**	**.44**
Model 10. Peer Abuse	27.94	0.12	22	1	No	0.77	0.07	1.00	.44	.35
Model 11. Witnessing Violence	27.36	1.83	21	1	No	0.75	0.08	1.01	.43	.32
Model 12. Gini Index	26.93	0.77	21	1	No	0.77	0.08	1.01	.44	.37
Model 13. Age	27.86	2.46	21	1	No	0.73	0.08	1.03	.45	.39
Model 14: Time at Risk	**33.59**	**9.46**	**22**	**1**	**Yes**	**0.54**	**0.10**	**1.10**	**.32**	**.34**
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	26.40	0.02	21	1	No	0.79	0.07	1.00	.45	.35
Model 16.Parent Abuse with Witnessing Violence	**29.05**	**4.44**	**21**	**1**	**Yes**	**0.68**	**0.09**	**1.05**	**.45**	**.36**
Model 17.Peer Abuse with Witnessing Violence	27.65	0.01	22	1	No	0.78	0.07	1.00	.45	.35
Combining Models for Parsimony										
Model 18. All equal but 2, 9, 14, and 16	28.22	3.20	23	5	No	0.79	0.07	1.11	.45	.29
Model 19. All equal but 2, 7, 9, 13, 14, and 16	27.65	1.97	23	4	No	0.82	0.06	1.08	.42	.32
Model 20. All equal	40.64	13.70	25	8	No	0.38	0.11	1.34	.26	.20
Model 21. Model 19 plus 3-6@0, 10@0, 12@0	**35.90**	**3.75**	**27**	**5**	**No**	**0.65**	**0.08**	**1.19**	**.42**	**.33**

Figure 38. Best Fitting Model using the Gini Index for Race Specific Analyses for General Recidivism

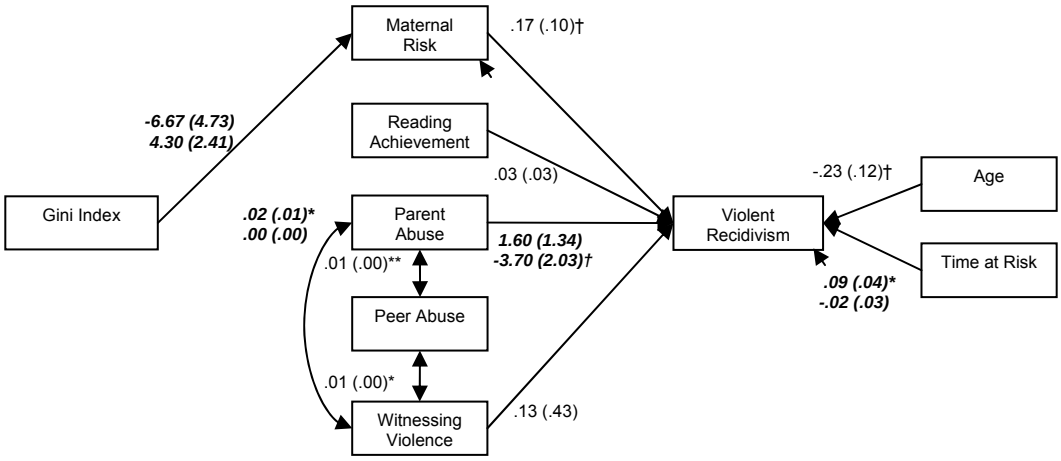


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=35.90; df = 27; CFI = 0.65; RMSEA = 0.08; WRMR = 1.19; $r^{2\,\text{White}}$ = .42; $r^{2\,\text{Black}}$ = .33

Table 47. Fit Statistics using the Gini Index for Race Specific Analyses for Violent Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2_{White}	r^2_{Black}
Model 1. Baseline Model	27.17		21			0.72	0.08	1.00	.47	.34
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**28.93**	**4.24**	**21**	**1**	**Yes**	**0.64**	**0.09**	**1.05**	**.47**	**.34**
Model 3. Reading Achievement	24.89	0.48	18	1	No	0.69	0.09	1.03	.47	.34
Model 4. Parental Abuse	27.09	1.17	21	1	No	0.72	0.08	1.01	.47	.34
Model 5. Peer Abuse	27.67	0.04	22	1	No	0.74	0.07	1.00	.47	.34
Model 6. Witnessing Violence	28.42	1.24	22	1	No	0.71	0.08	1.01	.47	.34
Predictors to Violent Recidivism										
Model 7. Maternal Risk	26.74	0.26	21	1	No	0.74	0.07	1.00	.46	.35
Model 8. Reading Achievement	28.04	2.71	21	1	No	0.68	0.08	1.03	.41	.28
Model 9. Parental Abuse	27.68	3.58	21	1	No	0.70	0.08	1.02	.44	.44
Model 10. Peer Abuse	28.06	0.42	22	1	No	0.72	0.08	1.00	.51	.32
Model 11. Witnessing Violence	28.59	1.57	22	1	No	0.70	0.08	1.01	.47	.29
Model 12. Gini Index	26.44		21	1		0.75	0.07	1.00	.47	.34
Model 13. Age	26.60	0.35	21	1	No	0.74	0.07	1.00	.46	.37
Model 14. Time at Risk	**30.20**	**4.07**	**22**	**1**	**Yes**	**0.63**	**0.09**	**1.05**	**.36**	**.30**
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	26.40	0.02	21	1	No	0.75	0.07	1.00	.47	.34
Model 16.Parent Abuse with Witnessing Violence	29.05	4.41	21	1	Yes	0.63	0.09	1,05	.47	.34
Model 17.Peer Abuse with Witnessing Violence	27.65	0.01	22	1	No	0.74	0.07	1.00	.47	.34
Combining Models for Parsimony										
Model 18. All equal but 2, 8, 9, 14, and 16	27.37	2.38	23	5	No	0.80	0.06	1.08	.45	.33
Model 19. All equal but 2,14, and 16	30.34	4.46	24	6	No	0.71	0.07	1.14	.41	.27
Model 20. All equal	36.24	8.90	25	7	No	0.48	0.10	1.26	.29	.25
Model 21. Model 18 plus 4-5@0, 10@0, 12@0	**36.08**	**3.78**	**27**	**5**	**No**	**0.59**	**0.08**	**1.21**	**.41**	**.35**

Figure 39. Best Fitting Model using the Gini Index for Race Specific Analyses for Violent Recidivism

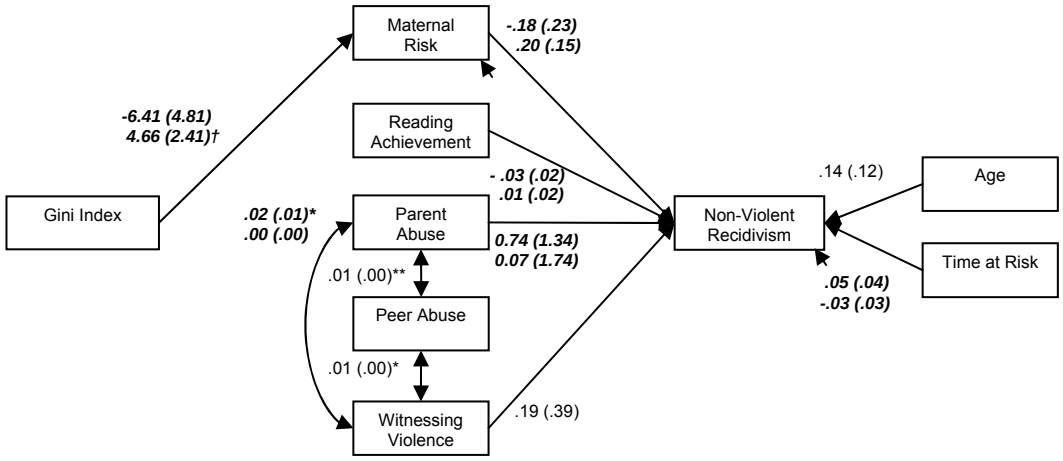


Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=36.08; df = 27; CFI = 0.59; RMSEA = 0.08; WRMR = 1.21; $r^{2\ White}$ = .41; $r^{2\ Black}$ = .35

Table 48. Fit Statistics using the Gini Index for Race Specific Analyses for Non-Violent Recidivism

	Goodness-of-Fit Indices									
	X^2	ΔX^2	df	Δ df	p <.05	CFI	RMSEA	WRMR	r^2 White	r^2 Black
Model 1. Baseline Model	27.17		21			0.66	0.08	1.00	.35	.17
Parameter Set Equal for Both Groups										
Gini Index to Other Predictors										
Model 2. Maternal Risk	**28.93**	**4.24**	**21**	**1**	**Yes**	**0.57**	**0.09**	**1.05**	**.35**	**.17**
Model 3. Reading Achievement	23.80	0.48	17	1	No	0.63	0.09	1.04	.34	.17
Model 4. Parental Abuse	27.09	1.17	21	1	No	0.67	0.08	1.01	.35	.17
Model 5. Peer Abuse	27.67	0.04	22	1	No	0.69	0.07	1.00	.35	.17
Model 6. Witnessing Violence	28.42	1.24	22	1	No	0.65	0.08	1.01	.35	.17
Predictors to Non-Violent Recidivism										
Model 7. Maternal Risk	28.63	1.56	22	1	No	0.64	0.08	1.02	.30	.14
Model 8. Reading Achievement	28.84	1.98	22	1	No	0.63	0.08	1.02	.20	.17
Model 9. Parental Abuse	27.64	1.78	21	1	No	0.65	0.08	1.01	.30	.14
Model 10. Peer Abuse	28.31	0.98	22	1	No	0.66	0.08	1.01	.34	.14
Model 11. Witnessing Violence	26.94	0.60	21	1	No	0.68	0.08	1.00	.32	.18
Model 12. Gini Index	28.13	0.73	22	1	No	0.67	0.08	1.01	.34	.17
Model 13. Age	28.42	1.23	22	1	No	0.65	0.08	1.01	.39	.15
Model 14: Time at Risk	29.32	2.67	22	1	No	0.60	0.08	1.03	.30	.17
Correlations among Violence Exposure										
Model 15.Parent Abuse with Peer Abuse	26.40	0.02	21	1	No	0.71	0.07	1.00	.35	.17
Model 16.Parent Abuse with Witnessing Violence	**29.05**	**4.44**	**21**	**1**	**Yes**	**0.56**	**0.09**	**1.05**	**.34**	**.17**
Model 17.Peer Abuse with Witnessing Violence	27.65	0.01	22	1	No	0.69	0.07	1.00	.35	.17
Combining Models for Parsimony										
Model 18. All equal but 2, 7, 8, 9, 14, and 16	26.30	2.30	21	4	No	0.71	0.07	1.09	.35	.10
Model 19. All equal but 2 and 16	29.42	3.86	23	5	No	0.65	0.08	1.16	.05	.08
Model 20. All equal	33.44	6.48	24	6	No	0.48	0.09	1.24	.06	.07
Model 21. Model 18 plus 3-6@0, 10@0 and 12@0	**38.36**	**3.29**	**27**	**4**	**No**	**0.38**	**0.09**	**1.24**	**.35**	**.09**

Figure 40. Best Fitting Model using the Gini Index for Race Specific Analyses– Non-Violent Recidivism



Note. *** p <.001. ** p <.01. * p <.05. † p < .10. Unstandardized coefficients are reported.
Pathways set to differ for White girls (above) and Black girls (below) are in bold and italics.
Model Statistics: X^2=38.36; df = 27; CFI = 0.38; RMSEA = 0.09; WRMR = 1.24; $r^{2\,White}$ = .35; $r^{2\,Black}$ = .09

APPENDIX E: CORRELATIONS AT THE INDIVIDUAL SUBSCALE LEVEL

Table 49. Pearson's Correlations among All Predictors and Wave I Antisocial Behavior

		WI – Total	W2 – Violent	W2 - Delinquent
Parental Physical Abuse		0.24*	0.31*	0.11
	Black	0.14	0.22	0.03
	White	0.33*	0.38*	0.19
➢ Mother		0.18	0.25*	0.06
	Black	0.13	0.21	0.02
	White	0.23	0.28*	0.10
➢ Father		0.20*	0.23*	0.12
	Black	0.05	0.09	0.01
	White	0.30*	0.33*	0.17
Peer Physical Abuse		0.44***	0.40***	0.38***
	Black	0.43***	0.39**	0.37**
	White	0.47**	0.43**	0.42**
➢ Friends		0.47***	0.46***	0.37***
	Black	0.50***	0.53***	0.36**
	White	0.44**	0.41**	0.38**
➢ Romantic Partner		0.34***	0.29**	0.33***
	Black	0.31*	0.24	0.31*
	White	0.42**	0.39**	0.40**
Witnessing Violence		0.49***	0.56***	0.31**
	Black	0.36**	0.45***	0.19
	White	0.63***	0.67***	0.44**
➢ Home		0.38***	0.37***	0.32**
	Black	0.48***	0.41**	0.43***
	White	0.30*	0.34*	0.20
➢ School		0.37***	0.43***	0.21*
	Black	0.21	0.34**	0.04
	White	0.56***	0.55***	0.42**
➢ Neighborhood		0.38***	0.44***	0.23*
	Black	0.25*	0.33**	0.12
	White	0.56***	0.59***	0.41**
Neighborhood Disadvantage		-0.02	-0.01	-0.05
	Black	-0.03	-0.04	-0.02
	White	0.12	0.11	0.07
➢ Female Headed		-0.02	0.00	-0.04
	Black	0.00	-0.02	0.00
	White	0.16	0.14	0.11
➢ Unemployment		-0.09	-0.09	-0.08
	Black	-0.13	-0.15	-0.07
	White	0.19	0.17	0.18
➢ Public Assistance		-0.13	-0.11	-0.14
	Black	-0.05	-0.04	-0.05
	White	-0.25	-0.24	-0.23
➢ Poverty		-0.07	-0.07	-0.06
	Black	-0.06	-0.07	-0.03
	White	0.03	0.00	0.06
Gini Index		-0.12	-0.12	-0.11
	Black	-0.07	-0.10	-0.02
	White	-0.12	-0.10	-0.12

Note. *** p < .001. ** p < .01. * p < .05.

Table 50. Pearson's Correlations among All Predictor Variables with Wave II Antisocial Behavior and Recidivism

		W2 Total	W2 Violent	W2 Delinquent	General Recidivism	Violent Recidivism	Non-Violent Recidivism
Parental Abuse		0.25*	0.33*	0.10	0.08	0.12	-0.02
	Black	0.17*	0.25	0.01	-0.14	-0.04	-0.10
	White	0.32*	0.40*	0.17	0.36*	0.33*	0.11
➢ Mother		0.11	0.20	0.00	0.08	0.12	-0.03
	Black	0.10	0.23	-0.10	-0.12	-0.01	-0.11
	White	0.11	0.17	0.10	0.28*	0.29*	0.07
➢ Father		0.28*	0.33**	0.16	0.08	0.08	0.01
	Black	0.20	0.22	0.15	-0.10	-0.06	-0.05
	White	0.33*	0.41**	0.15	0.39*	0.29*	0.21
Peer Abuse		0.15	0.23*	0.08	0.01	-0.05	0.06
	Black	0.18	0.24	0.11	-0.02	-0.14	0.11
	White	0.13	0.23	0.04	0.03	0.07	-0.04
➢ Friends		0.19	0.25*	0.14	-0.04	-0.04	-0.01
	Black	0.16	0.16	0.19	0.01	-0.12	0.12
	White	0.21	0.31*	0.10	-0.08	0.07	-0.16
➢ Romantic Partner		0.09	0.16	0.01	0.07	-0.03	0.10
	Black	0.18	0.26	0.07	0.00	-0.10	0.09
	White	0.00	0.07	-0.07	0.10	0.06	0.06
Witnessing Violence		0.27*	0.29*	0.20	0.22*	0.14	0.12
	Black	0.37*	0.37*	0.28	0.22	0.09	0.13
	White	0.15	0.19	0.08	0.23	0.20	0.09
➢ Home		0.23	0.22*	0.16	0.13	0.12	0.03
	Black	0.29	0.28	0.24	0.04	0.06	-0.02
	White	0.17	0.17	0.06	0.35*	0.25	0.19
➢ School		0.20	0.20	0.17	0.13	0.09	0.06
	Black	0.30*	0.28	0.25	0.11	0.06	0.06
	White	0.07	0.09	0.05	0.17	0.14	0.08
➢ Neighborhood		0.22*	0.25*	0.17	0.23*	0.15	0.11
	Black	0.29*	0.34*	0.20	0.28*	0.14	0.15
	White	0.13	0.16	0.14	0.10	0.15	-0.02
Neighborhood Disadvantage		-0.07	-0.07	-0.08	0.24*	-0.04	0.29*
	Black	0.01	0.01	0.00	0.26	0.01	0.25
	White	-0.17	-0.15	-0.24	-0.12	-0.27	0.12
➢ Female Headed		-0.10	-0.10	-0.10	0.26	-0.06	0.33
	Black	-0.06	0.00	-0.08	0.24	-0.07	0.30*
	White	-0.19	-0.23	-0.18	-0.09	-0.25	0.13
➢ Unemployment		0.03	0.01	-0.01	0.17	0.06	0.14
	Black	0.00	-0.02	-0.01	0.10	0.08	0.03
	White	0.17	0.23	-0.01	-0.12	-0.23	0.08
➢ Public Assistance		-0.06	-0.06	-0.07	0.16	-0.07	0.24*
	Black	-0.02	-0.02	-0.02	0.17	-0.08	0.24
	White	-0.14	-0.10	-0.22	-0.16	-0.18	-0.03
➢ Poverty		-0.05	-0.06	-0.05	0.17	-0.08	0.26**
	Black	0.01	-0.01	0.03	0.14	-0.11	0.23
	White	-0.15	-0.10	-0.25	-0.10	-0.19	0.06
Gini Index		0.03	0.01	0.01	0.17	0.03	0.17
	Black	0.15	0.11	0.13	0.12	0.00	0.12
	White	-0.13	-0.05	-0.19	-0.02	-0.02	-0.01

Note. *** p < .001. ** p < .01. * p < .05.