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Childhood Maltreatment, Parental Monitoring, and Self-Control among Homeless Young Adults: Consequences for Negative Social Outcomes

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Abstract

Although parenting factors have been found to contribute to self-control, little is understood about how experiences of maltreatment affect the development of self-control and whether self-control mediates the relationship between maltreatment and negative social outcomes, especially among homeless individuals. This study examined whether lower parental monitoring, physical abuse, and neglect affected the development of self-control and if self-control mediated the relationship between parenting factors and negative social outcomes among a sample of homeless young adults. Results from path analyses indicated that lower parental monitoring and earlier age at first abuse contributed to less cognitive self-control. The effect of monitoring on criminal behavior was partially mediated by self-control. Independent of self-control, low monitoring, physical abuse, and neglect had direct effects on negative outcomes. Running away, a behavioral indicator of self-control, also had direct effects on negative outcomes.

Keywords: homeless young adults, self-control, abuse, delinquency, victimization

Gottfredson and Hirschi's (1990) general theory of crime (GTC) is one of the most widely tested theories of crime and delinquency in the past 20 years. In general, this research demonstrates that the theory's core construct, low self-control, is associated with antisocial behavior and other negative social outcomes (see meta-analysis by Pratt & Cullen, 2000; e.g., Benda, 2005; Crettaci, 2008; Jones & Quisenberry, 2004). The theory has also been tested among special populations like criminal offenders (Longshore, Turner, & Stein, 1996; Piquero, MacDonald, Dobrin, Daigle, & Cullen, 2005), incarcerated juveniles (DeLisi & Vaughn, 2008), and homeless youth (Baron, 2003; Baron, Forde, & Kay, 2007), again demonstrating a relationship between low self-control and negative social outcomes. Researchers have also examined how family structure and parenting factors like monitoring and discipline influence the development of self-control and if the effect of these family factors is mediated by self-control (e.g., Gibbs, Giever, & Martin, 1998; Hay, 2001; Latimore, Tittle, & Grasmick, 2006).

Although child maltreatment has also been linked to criminal behavior (Lansford et al., 2007; Rebellon & Van Gundy, 2005; Widom & Ames, 1994), little research has directly examined how experiencing abuse may contribute to the development of self-control and how self-control may mediate the relationship between maltreatment and negative social outcomes. Examining these relationships among homeless youth is particularly important given their exceptionally elevated rates of abuse and neglect (Tyler & Cauce, 2002; Tyler & Melander, 2009). Homeless youth also have high rates of criminal behavior (Hagan & McCarthy, 1997; Whitbeck & Hoyt, 1999), substance use (Baron, 1999; Chen, Tyler, Whitbeck, & Hoyt, 2004; MacLean, Paradise, & Cauce, 1999), association with deviant peers (Hagan & McCarthy, 1997; Whitbeck & Hoyt, 1999), and victimization (Hoyt, Ryan, & Cauce, 1999; Tyler, Hoyt, Whitbeck, & Cauce, 2001), all of which have been linked to low self-control (B. R. E. Wright, Caspi, Moffitt, & Silva, 1999; Evans, Cullen, Burton, Dunaway, & Benson, 1997; Schreck, 1999).

Using a sample of homeless young adults, the purpose of the current study was to explore the relationships among child maltreatment, self-control, and four negative social outcomes, including criminal behavior, substance use, association with deviant peers, and physical victimization, and to examine whether self-control mediated the relationship between parenting factors and negative outcomes. The findings have important implications for GTC in terms of the role of child maltreatment, the applicability of the theory for understanding negative social outcomes, and the generalizability of the theory to special populations like homeless young adults.

Literature Review

In GTC, Gottfredson and Hirschi (1990) argued that crime is the result of weak self-control brought together with the opportunity for deviance. People with low self-control demonstrate impulsiveness, an affinity for risk taking, low frustration tolerance, physicality (i.e., relying on physical rather than cognitive solutions), short-sightedness, and self-centeredness. They are thus less able to restrain themselves when presented with the opportunity to engage in deviance. According to Gottfredson and Hirschi, children must be socialized to have self-control; low self-control results when appropriate training, discipline, and nurturance are absent. The theorists contended that in order for a child to develop self-control, someone with affection for or investment in the child must supervise and monitor the child's behavior, recognize deviant behavior when it occurs, and consistently and appropriately sanction such behavior (Gottfredson & Hirschi, 1990).

Gottfredson and Hirschi (1990) argued that by late childhood, these socialization experiences, or lack thereof, coalesce into a stable construct. The behavior problems of children with low self-control become evident, and as they age, people with low self-control continue to manifest it in criminal behavior and other acts like promiscuity, reckless accidents, and substance use. Furthermore, people with low self-control experience other negative social consequences, such as associating with a deviant peer group, relationship troubles, and irregular employment. People with low self-control, because they dislike settings that may require constraints on their behavior, may in effect "gravitate to the street" where their lives are less restricted (Gottfredson & Hirschi, 1990, p. 157).

Research on Parenting Factors and Self-Control

Although Gottfredson and Hirschi (1990) list the parenting qualities needed for the development of self-control, what is less theoretically clear is the degree to which these contingencies should be manifested and what combination is optimal (Latimore et al., 2006). Two central hypotheses regarding parenting can be derived from GTC (Gibbs et al., 1998). First, parenting factors like monitoring and discipline should have an impact on a child's level of self-control. Furthermore, consideration of the parental affection or investment contingency has led researchers to assess the warmth or closeness of the parent-child relationship and the degree of open communication between parent and child (Hope, Grasmick, & Pointon, 2003). The second central hypothesis derived from the theory is that a child's level of self-control should mediate the relationship between parenting factors and deviant behavior; thus, any effect of parenting should be indirect through self-control.

Research focused on the first hypothesis—that parenting influences low self-control—finds that various measures of the key parenting contingencies influence children's self-control. Although parental supervision/monitoring and attachment are positively linked to self-control (Hay & Forrest, 2006; Hope et al., 2003; Meldrum, 2008), there is some debate concerning which factor matters more. Lynsky, Winfree, Esbensen, and Clason (2000) found that monitoring had a stronger effect on self-control than did attachment. In contrast, Cochran, Wood, Sellers, Wilkerson, and Chamlin (1998), who used a measure of parental attachment and a measure of effective parenting that included monitoring, the recognition of incorrect behavior, and discipline, found that only attachment predicted self-control. There are also important caveats surrounding the use of discipline and punishment. Although the theory predicts that low supervision and limited discipline should result in low self-control, poor supervision and high levels of discipline have been linked to low self-control (Pratt, Turner, & Piquero, 2004), as have punishments such as spanking, revoking privileges, and isolation (Nofziger, 2008). This line of research suggests that the nature or context of discipline may be an important factor in developing self-control.

Research focused on the second hypothesis—that self-control mediates the effect of parenting on antisocial outcomes—finds moderate support for this process. This may be attributed in part to the myriad ways both parenting variables and self-control variables are operationalized. One group of studies shows that self-control mediates the effects of parenting factors on antisocial outcomes (Feldman & Weinberger, 1994; Gibbs et al., 1998; Gibbs, Giever, & Higgins, 2003). Another group of studies shows only partial or limited mediation (Perrone, Sullivan, Pratt, & Margaryan, 2004; Polakowski, 1994); that is, the effects of parenting remained statistically significant above the effects of self-control. Studies that examine separate elements of parenting have also produced mixed results. For example, Unnever, Cullen, and Pratt (2003) noted that poor parental monitoring and inconsistent discipline were related to low self-control. Although low self-control entirely mediated the effects of discipline on delinquency, it only partially mediated the effects of monitoring, which retained significant relationships with delinquency and arrest. This study and others (Chapple, Hope, & Whiteford, 2005; Vazsonyi & Belliston, 2007; Vazsonyi & Kalnisek, 2008) indicate that parental attachment/support, discipline, and monitoring are relevant for self-control, but that monitoring in particular has implications for deviant outcomes beyond its relationship with self-control.

To address the inconsistency between the empirical evidence and the general theory's positions, Hay (2001) invoked Baumrind's theory of authoritative parenting. Baumrind (1966, 1991) classifies parenting along two dimensions. Demandingness refers to the degree to which parents expect age-appropriate behavior from their child, provide supervision, confront disobedience, and enact appropriate discipline. Responsiveness refers to the degree to which parents support their child's needs, fostering individuality and self-regulation. Authoritative parents strike a balance between these two dimensions (Baumrind, 1996). In contrast, authoritarian parents have high demands but are not responsive, permissive parents are responsive but not demanding, and rejecting-neglecting parents are neither demanding nor responsive and may be actively rejecting. Research indicates that children in authoritative families fare the best across indicators of social and emotional adjustment, whereas children in rejecting-neglecting families fare the worst (Baumrind, 1994).

Baumrind's theory speaks not only to the importance of consistent and appropriate monitoring and discipline but also to purposeful attention to the socio-emotional needs of the child, including parental support for self-regulation. GTC places emphasis on monitoring and discipline, but later studies incorporate aspects of parental responsiveness and the context of discipline in order to refine the theory. These studies have found that measures of authoritative parenting significantly predict self-control and at least partially mediate the effect of parenting factors on deviance (Burt, Simons, & Simons, 2006; Hay, 2001; Simons, Simons, Chen, Brody, & Lin, 2007; Unnever, Cullen, & Agnew, 2007).

In sum, the research on the role of parenting in GTC reveals a nuanced relationship between parenting factors and self-control, but variation in how parenting is measured makes it difficult to ascertain what combination of parenting factors is ideal. Furthermore, tests of the purported mediating effect of self-control are equivocal. Taken together, research suggests that the nature and context of parenting, rather than just the mechanics of parenting, may be more relevant for understanding the relationship among parenting, self-control, and negative social outcomes.

The Effects of Maltreatment on Self-Control

One factor that colors the nature of parenting is maltreatment. In this vein, Gottfredson and Hirschi (1990) contended that parents who themselves lack self-control do not socialize their children well, thus producing children with low self-control. Effective parenting, at least in the manner outlined in the theory, requires intensive effort and selflessness, characteristics that require self-control (Nofziger, 2008). Indeed, research indicates that low maternal self-control is related to low child self-control, a relationship partially mediated by supervision and punishment techniques (Nofziger, 2008). Considering research on parent criminality, Gottfredson and Hirschi (1990) also contended that in families where parents have criminal histories, supervision tends to be lax or inadequate, but punishment tends to be "easy, short-term, and insensitive – that is, yelling and screaming, slapping and hitting, with threats that are not carried out" (p. 101). From this theoretical position, it can be hypothesized that children who are raised in abusive households are at greater risk for having weak self-control because the poor parenting practices correlated with abuse may impede the development of self-control (Avakame, 1998; Rebellon & Van Gundy, 2005).

The literature on authoritative parenting points to similar conclusions (Baumrind, 1994). Abusive parents are less likely to invest the time, energy, and consistent structure that close supervision requires. The discipline employed by abusive parents is inconsistent, arbitrary, and not contingent on specific and appropriate behavioral expectations. Parents in both abusive and neglectful families are less responsive to the socio-emotional needs of their children, exacerbating the problems of ineffective monitoring and discipline, thereby undermining positive cognitive and emotional development (V. Lee & Hoaken, 2007).

Thus, in abusive households, where supervision and discipline are erratic and harsh, GTC and authoritative parenting theory suggests that children in these situations would have weak self-control. Interestingly, only one study grounded in GTC has addressed this issue, finding that neglect was unrelated to self-control (Chapple, Tyler, & Bersani, 2005). In contrast, developmental research supports the link between maltreatment and poor self-control and associated characteristics (Cicchetti, 2004; Darwish, Esquivel, Houtz, & Alfonso, 2001; Graziano & Mills, 1992). These factors in turn have been shown to mediate the relationship between childhood maltreatment and adult antisocial behavior (Crawford & Wright, 2007; Horwitz, Widom, McLaughlin, & White, 2001; White & Widom, 2003).

The age at which abuse first occurs may be consequential to the development of self-control. Early maltreatment may be especially disruptive to a child's development (Graziano & Mills, 1992) and may significantly disrupt the socialization patterns that contribute to the development of self-control. Lansford et al. (2002) determined that children who experienced physical abuse prior to kindergarten were more likely to have negative outcomes 12 years later across a host of domains, including social, behavioral, and cognitive problems. In an analysis of the same data, Lansford et al. (2007) found that by age 21, the abused children were more likely to have been arrested and experienced other negative social outcomes like teen parenthood, having a child while unmarried, not graduating from high school, and being fired from a job. Similarly, Thornberry, Henry, Ireland, and Smith (2010) demonstrated that childhood abuse was linked to internalizing problems, whereas adolescent maltreatment was linked to criminal and risky behaviors. Persistent maltreatment also puts young people at risk for chronic delinquency (Ireland, Smith, & Thornberry, 2002). Such research suggests that developmental and social deficits apparent in adolescence and young adulthood that are associated with early maltreatment mediate the relationship between maltreatment and antisocial behavior, particularly if maltreatment is persistent (White & Widom, 2003).

Homeless Youth

In the literature about homeless youth, abuse is an important precursor of running away behaviors (Hagan & McCarthy, 1997; Tyler et al., 2001). Both abuse and running away are associated with the likelihood of arrest (Kaufman & Widom, 1999). Kim, Tajima, Herrenkohl, and Huang (2009) found that physical and psychological abuse contributed to running away behavior, and abuse only indirectly affected delinquency through running away. In contrast, other research on homeless youth has found a direct link between early family abuse and delinquency (McMorris, Tyler, Whitbeck, & Hoyt, 2002) and family abuse and dealing drugs (Whitbeck & Hoyt, 1999). Additionally, Whitbeck, Hoyt, and Ackley (1997) interviewed homeless youth and their families, finding that both parents

and runaways generally agreed the adolescent exhibited conduct problems while still in the household. The interviews also suggested that the potential source for these problems was rooted in poor parenting styles. Based on the researchers' evaluation of a comparison group, runaways and their parents described households with lower levels of monitoring and support but higher levels of rejection, family violence, and sexual abuse (Whitbeck et al., 1997).

The research literature regarding homeless youth can be interpreted from a general theory framework (e.g., Baron, 2003; Baron et al., 2007). Even within high-risk populations, individual differences can contribute to variability in involvement in crime and other risky behaviors (Chen, Thrane, Whitbeck, Johnson, & Hoyt, 2007). Maltreatment and problematic parenting may contribute to low self-control, which can be manifested in running away and other disruptive behaviors, potentially leading to homelessness, delinquency, and other negative social consequences.

Self-Control and Negative Social Consequences

GTC predicts that individuals with low self-control, in addition to criminal behavior, experience other negative social consequences. In a test of a general sample, Evans et al. (1997) found that low self-control predicted poor relationship quality, association with criminal peers, internalization of criminal values, lower levels of educational and occupational attainment, and living in a disorderly neighborhood. Likewise, B. R. E. Wright et al. (1999) linked low childhood self-control to low adolescent self-control, erosion of conventional bonds, association with delinquent peers, and delinquency in adolescence. In turn, these factors influenced crime in young adulthood. Baron's (2003) analysis of a homeless sample showed that low self-control was related to drug use, deviant peers, deviant values, homelessness, and unemployment.

Low self-control is, in effect, incompatible with sustained involvement in prosocial relationships and activities, which require the ability to express empathy, delay gratification, and consider the long-term consequences of one's actions. According to Gottfredson and Hirschi (1990), people with low self-control are more likely to have a lifestyle with few restrictions, have difficulty making friends and maintaining relationships, and "flock together" with others similarly low in self-control. On this point, the theorists contended that participation in deviant groups is itself indicative of low self-control. Research has provided evidence for the relationship between low self-control and difficult peer relationships (Chapple, 2005) and between self-control and associating with deviant peers (Longshore, Chang, Hsieh, & Messina, 2004; McGloin & Shermer, 2010).

The theory has also been expanded to include criminal victimization as another negative social consequence experienced by people with low self-control (Forde & Kennedy, 1997; Piquero et al., 2005; Schreck, 1999). Just as low self-control manifests itself in crime, it may manifest itself in self-selection into the kinds of risky social situations those with self-control would prudently avoid. Moreover, once in these settings, people with low self-control may interpret the situation, assess the potential consequences, and continue to act in ways that increase their likelihood of victimization (Baron et al., 2007; Piquero et al., 2005). Low self-control has been linked to increased victimization (Higgins, 2009; Nofziger, 2009). Although people with low self-control may self-select into risky situations, research suggests that beyond their involvement in other imprudent activities,

people with low self-control experience greater levels of victimization (Schreck, 1999; Schreck, Stewart, & Fisher, 2006; Schreck, Wright, & Miller, 2002).

Studies of high-risk populations, like criminal offenders and homeless youth—groups whose lifestyle already influences their risk of victimization and other negative outcomes—also indicate similar effects. In a sample of drug-using, African American female offenders with high degrees of residential instability, Stewart, Elifson, and Sterk (2004) found self-control was related to victimization, controlling for high-risk behavior, involvement with deviant peers, and offending variables. Piquero and colleagues' (2005) analysis of a high-risk population of juvenile offenders revealed that low self-control was related to later homicide victimization. In a sample of homeless male youth, Baron et al. (2007) found self-control to be associated with victimization, particularly when considering the influence of self-control on the decision-making processes. These studies point to the importance of understanding how, in high-risk populations, self-control affects not only criminal behavior but also risky associations and the likelihood of victimization.

The Current Study

Although several studies address how parenting practices are associated with self-control, few have assessed how maltreatment affects the development of self-control. GTC and modifications suggested by later researchers (e.g., Hay, 2001) point to several key factors, including monitoring and authoritative parenting, which is defined by consistent discipline enacted in a context of support and warmth. In families where maltreatment occurs, these key parenting skills may be lacking, resulting in children with low self-control, particularly if the maltreatment begins early in the child's life. Therefore, it was hypothesized that earlier age of first abuse, experiences of abuse and neglect, and lower levels of monitoring would lead to lower levels of self-control. GTC also postulates that low self-control will lead people to engage in criminal and analogous behavior, associate with deviant peers, and to be at greater risk for victimization. The theory implies that any effect of parenting on these outcomes is indirect through self-control. Therefore, it was hypothesized that self-control would mediate the relationship between these parenting factors and four negative social outcomes, including criminal behavior, substance use, association with deviant peers, and physical victimization. These hypotheses were tested using a sample of homeless young adults, a population that is known to have experienced elevated rates of childhood maltreatment as well as be at greater risk for negative outcomes.

METHOD

Data and Participants

Data are from the Homeless Young Adult Project, a pilot study designed to examine the effect of neglect and abuse histories on homeless young adults' mental health and high-risk behaviors. From April of 2004 through June of 2005, 199 young adults were interviewed in three midwestern cities. Of this total, 144 were homeless and 55 were currently housed at the time of the interview. Homeless was defined as those currently re-

siding in a shelter, on the street, or living independently (e.g., with friends) because they had run away, been pushed out, or drifted out of their family of origin. The 55 young adults were chosen via peer nominations from their homeless counterparts. Despite being housed at the time of the interview, 28 out of the 55 housed young adults had extensive histories of being homeless and had run away from home numerous times ($n = 27$ had no history of running away or being homeless). The final sample used for the current study included 172 young adults who were homeless or had a history of running away and being homeless.

Sample Characteristics

The sample included 69 females (40%) and 103 males (60%). The age of the sample ranged from 19 to 26 years with a mean of 21.5 years. Of the sample, 47% ($n = 81$) had received a high school diploma. The majority of the sample was White (80%, $n = 137$). In addition, 78% of respondents ($n = 134$) had experienced neglect, and 95% ($n = 164$) had experienced at least one type of physical abuse. The mean for cognitive self-control was 1.92 on a scale ranging from 0 to 4. In terms of their history of running away, 46% of youth reported running from home one time ($n = 78$), but 22% had run two or three times ($n = 38$), and 32% had run four or more times ($n = 55$). Almost half of the sample had engaged in three or more criminal behaviors since leaving home ($n = 83$). Substance use in the past year ranged from weekly to monthly usage. In terms of their peers, 28% of study youth ($n = 48$) reported having close friends who have engaged in seven criminal behaviors, with a mean of 4.2 different behaviors. Finally, 94% of respondents ($n = 162$) have been physically victimized at least once since being on the street.

Procedure

Experienced interviewers who have served for several years in agencies and shelters that support homeless young people and are knowledgeable about local street cultures (e.g., where to locate youth) conducted the individual interviews. All interviewers completed the Collaborative Institutional Review Board (IRB) Training Initiative course for the protection of human participants in research. Interviewers obtained informed consent from young adults prior to participation, told them about the confidentiality of the study, and informed them that their participation was voluntary. The interviews, which were conducted in shelter interview rooms or quiet corners of fast food restaurants or coffee shops, lasted approximately 1 hour, and all participants received \$25 for their participation. Referrals for shelter, counseling services, and food services were offered to the young adults at the time of the interview. Although interviewers did not formally tally screening rates, they reported that very few young adults refused to participate.

Measures

The majority of measures used in the questionnaire have been used in previous research with homeless populations (e.g., Hagan & McCarthy, 1997; Tyler et al., 2001; Whitbeck & Hoyt, 1999; Whitbeck & Simons, 1990), and these indicators have been shown to have very good reliability.

Negative social outcomes. Criminal behavior was measured with 12 individual variables. Respondents were asked how often they had engaged in a series of delinquent behaviors including theft, fraud, and violence (adapted from Whitbeck & Simons, 1990). Alpha reliability was 0.89. Due to skew, each item was dichotomized, and an index was created where higher scores indicated a greater number of different delinquent acts. This scale has been shown to have good reliability among other homeless samples (e.g., $\alpha = .73$, Tyler et al., 2001; $\alpha = .75$, Whitbeck & Simons, 1990).

Substance use was measured by combining 12 individual variables that asked respondents how often they had drunk beer, wine, or liquor; had used marijuana; or had used crack, amphetamines, cocaine, opiates, hallucinogens, barbiturates, inhalants, or designer drugs in the past year. Cronbach's alpha was 0.78. A mean scale was created with a range of 0 = *never* to 4 = *daily*. The actual range was 0 to 2.5. Other research on homeless populations using these same variables report similar reliabilities (e.g., $\alpha = .82$ for males and $.83$ for females, Whitbeck, Hoyt, & Yoder, 1999).

Deviant peers was measured with seven variables that asked respondents, for example, whether any of their close friends ever stole from a store, robbed someone, or sold drugs (0 = *no*, 1 = *yes*). A count scale was created using these items that ranged from 0 to 7.

Victimization was measured with six variables that asked respondents, for example, how many times they had something stolen from them, been beaten up, and been robbed. The items were summed with a higher score indicating greater physical victimization. Cronbach's alpha was 0.77.

Parenting variables. Monitoring was measured using nine variables. Respondents were asked, for example, whether their caretaker knew the parents of their friends, where they were after school, who they were going to be with before they went out, and how often they were expected to call their caretaker if they were going to be home late. Response categories ranged from 0 = *never* to 4 = *always*. A mean scale was created that ranged from 0 to 4. Cronbach's alpha was 0.88. Whitbeck and Hoyt (1999) report an alpha of 0.75 for this scale among their homeless sample.

Age at first physical abuse was measured with a single variable that asked respondents at what age they first experienced physical abuse as a child (under age 18). Ages ranged from 0 to 16 years. Physical abuse was measured with variables from the Conflict Tactics Scale-Parent Child (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Respondents were asked how many times their caretaker had engaged in a variety of abusive actions toward them before they were 18 years old (e.g., slapping them, kicking them, and assaulting them with a knife or gun). Response categories ranged from 0 = *never* to 6 = *more than 20 times*. Cronbach's alpha was 0.88. A mean scale was created using the 16 individual items, with a higher score indicating more physical abuse. This scale has been shown to have excellent reliability among other homeless populations (e.g., $\alpha = .88$, Whitbeck & Simons, 1990).

Neglect comprised five variables from a supplementary scale within the CTSPC (Straus et al., 1998). For example, respondents were asked how many times their caretaker left them home alone when someone should have been with them. Response categories ranged from 0 = *never* to 6 = *more than 20 times*. Cronbach's alpha was 0.83. A mean scale was created us-

ing the five individual items, with a higher score indicating more neglect. Chan, Brownridge, Yan, Fong, and Tiwari (2011) also report a high alpha for this scale ($\alpha = .82$).

Self-control. Although Hirschi and Gottfredson (1993) advocate a behavioral indicator of low self-control, critics argue that such an indicator is tautological, and they advance a cognitive indicator, such as the widely used scale developed by Grasmick, Tittle, Bur-sik, and Arneklev (1993). In analyzing the relative utility of cognitive versus behavior indicators, Tittle, Ward, and Grasmick (2003) determined that both kinds of measures lend support to GTC, but that neither proved an advantage over the other. Given that the sam-ple for this study involves a population whose lifestyle could itself be indicative of low self-control, both types of measures were used in this study. The cognitive indicator, low cognitive self-control, was measured with an eight-item scale developed by Chapple and Hope (2003) that draws from Gottfredson and Hirschi's (1990) conceptualization of self-control. The scale asked respondents to what extent they agreed with statements such as "Rules were meant to be broken" and "To get ahead, you have to do some things that are not right." Responses ranged from 1 = *strongly agree* to 4 = *strongly disagree*. All items were reverse coded such that a higher score indicated lower cognitive self-control. A mean scale was then created using these eight items (see Appendix A). Cronbach's alpha was 0.82. The behavioral indicator, number of times run, was a single item that measured the total number of times the respondent had run away from home. Due to skew, this vari-able was collapsed into 1 = *ran away once*, 2 = *ran away 2 or 3 times*, 3 = *ran away 4 or 5 times*, 4 = *ran away 6 to 10 times*, 5 = *ran away 11 to 20 times*, and 6 = *ran away more than 20 times*.

Demographic control variables. Gender was coded 0 = *male* and 1 = *female*. Race was coded 0 = *non-White* and 1 = *White*. Age was a continuous variable that measured how old the respondents were at the time of the interview.

Analysis

Correlations among all variables are depicted in Appendix B. In order to explore the numerous risks associated with criminal behavior, substance use, deviant peers, and vic-timization, a fully recursive path model was estimated using the maximum likelihood (ML) procedure in Mplus 5.1 (Muthen & Muthen, 1998-2007). The statistical assumptions of ML estimation (e.g., multivariate normality of the endogenous variables) were satis-fied. This model takes into account both the direct effects and the indirect effects through the self-control measures, low cognitive self-control, and number of times run.

RESULTS

Results for the key variables are shown in Figure 1; for ease of presentation, control variables are not depicted in the figure and only significant paths are shown. Table 1 shows the direct, indirect, and total effects for the full model on the four social outcome variables. The effect estimate presented for direct, indirect, and total effects are all stan-dardized coefficients and have the same interpretation as the beta coefficients in Figure 1. That is, direct effects refer to the direct relation between two variables, indirect effects re-

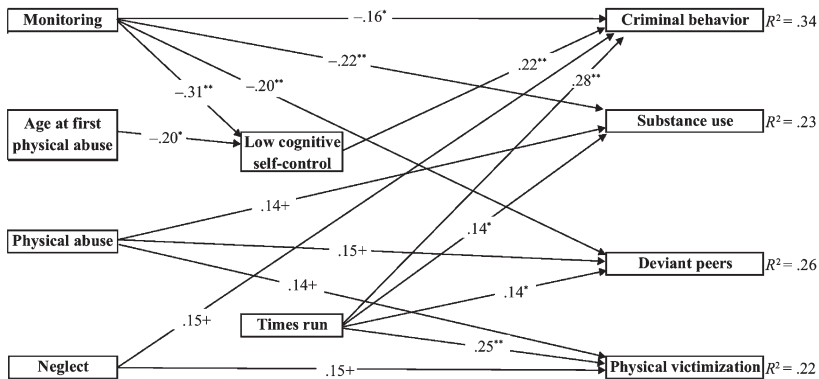


Figure 1. Standardized Path Coefficients, $N = 172$; $** p < .01$, $* p < .05$, $+ p < .10$. The model controls for gender, race, and age (paths not shown). For the other variables, only significant paths are shown.

fer to the effect of one variable on an outcome through another variable, and the total effect is the combination of both direct and indirect effects.

Direct Effects

Results revealed that lower levels of monitoring were related to lower cognitive self-control ($\beta = -.31$). Younger age at first abuse was also associated with lower cognitive self-control ($\beta = -.20$). Times run was also positively associated with gender ($\beta = .22$), indicating that females were likely to run away from home more often.

In terms of the negative social outcome variables, lower levels of monitoring ($\beta = -.16$) were associated with participation in more criminal behavior. Additionally, respondents who were older ($\beta = .24$), ran from home more frequently ($\beta = .28$), had lower levels of cognitive self-control ($\beta = .22$), and experienced higher levels of neglect ($\beta = .15$) also engaged in greater criminal behavior. Being male ($\beta = -.15$), having experienced more types of physical abuse ($\beta = .14$), having lower levels of parental monitoring ($\beta = -.22$), and having run away more frequently ($\beta = .14$) were all associated with greater substance use. Males ($\beta = -.18$), older youth ($\beta = .19$), lower levels of parental monitoring ($\beta = -.20$), running from home more often ($\beta = .14$), and experiencing more physical abuse ($\beta = .15$) were all associated with larger numbers of deviant peers. Finally, the model revealed that older homeless youth ($\beta = .19$), those who experienced more physical abuse ($\beta = .14$), more neglect ($\beta = .15$), and those who had run away from home more often ($\beta = .25$) were significantly more likely to have experienced more physical victimization on the street.

Indirect Effects

The results revealed that in addition to having direct effects, monitoring also had significant indirect effects on criminal behavior through lower cognitive self-control ($\beta = -.09$). Age at first abuse also had a significant direct association with cognitive self-control, but this parenting factor did not operate indirectly on outcomes at a significant level. All other indirect effects were either nonsignificant or marginally significant (see Table 1).

Table 1. Full Model Results

Variables	Direct Effect Estimate	SE	Total Indirect Effect Estimate	SE	Total Effect Estimate	SE
Criminal behavior						
Demographic controls						
Female	-.039	.068	.037	.031	-.002	.072
White	.071	.064	-.006	.026	.066	.069
Age	.242***	.063	-.005	.026	.237***	.067
Parenting factors						
Monitoring	-.163*	.070	-.094**	.035	-.257***	.070
Age at physical abuse	.040	.072	-.035	.032	.005	.076
Physical abuse	.089	.074	.045	.032	.133+	.079
Neglect	.152+	.080	.008	.035	.160+	.085
Self-control						
Low cognitive self-control	.219***	.067				
Number of times run	.278***	.064				
Substance use						
Demographic controls						
Female	-.151*	.073	.020	.022	-.131+	.073
White	.061	.070	-.003	.013	.058	.071
Age	-.035	.069	-.002	.013	-.038	.070
Parenting factors						
Monitoring	-.219**	.076	-.047+	.028	-.266***	.072
Age at physical abuse	.082	.078	-.017	.021	.065	.078
Physical abuse	.140+	.081	.022	.019	.162*	.081
Neglect	.130	.088	.005	.022	.135	.088
Self-control						
Low cognitive self-control	.106	.074				
Number of times run	.143*	.073				
Deviant peers						
Demographic controls						
Female	-.177*	.072	.020	.021	-.156*	.071
White	.058	.068	-.003	.013	.055	.069
Age	.186**	.067	-.002	.013	.183**	.068
Parenting factors						
Monitoring	-.200**	.074	-.045	.028	-.245***	.071
Age at physical abuse	-.067	.076	-.016	.020	-.082	.076
Physical abuse	.145+	.078	.022	.018	.166*	.079
Neglect	.064	.085	.006	.022	.070	.086
Self-control						
Low cognitive self-control	.102	.072				
Number of times run	.143*	.070				
Physical victimization						
Demographic controls						
Female	-.055	.075	.050+	.026	-.005	.075
White	.062	.070	-.004	.019	.058	.072
Age	.191**	.068	-.003	.019	.188**	.071
Parenting factors						
Monitoring	.062	.077	-.037	.032	.025	.076
Age at physical abuse	-.068	.079	-.001	.026	-.087	.081
Physical abuse	.143+	.081	.021	.025	.164*	.083
Neglect	.150+	.089	.030	.028	.180*	.091
Self-control						
Low cognitive self-control	.044	.075				
Number of times run	.254***	.071				

Standardized coefficients shown.

+ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Total Effects

Examining the total effects for each of the four negative social outcomes indicated that monitoring, physical abuse, and number of times run were all important contributors (see Table 1). Neglect, age, and gender had more specific effects. In the model for criminal behavior ($R^2 = .34$), low cognitive self-control and number of times run exerted significant direct effects. Lack of monitoring ($\beta = -.26$) and age ($\beta = .24$) had significant total effects, as did neglect ($\beta = .16$) and physical abuse ($\beta = .13$), albeit to a lesser extent. In the model for substance use ($R^2 = .23$), number of times run had a significant direct effect. Lack of monitoring ($\beta = -.27$) and physical abuse ($\beta = .16$) had significant total effects, and males ($\beta = -.13$) were more likely to use substances. Similarly, in the model for associating with deviant peers ($R^2 = .26$), number of times run had a significant effect. Lack of monitoring ($\beta = -.25$) and physical abuse ($\beta = .17$) had significant total effects, and older respondents ($\beta = .18$) and males ($\beta = -.16$) were more likely to have a greater number of deviant peers. Finally, in the model for physical victimization ($R^2 = .22$), number of times run had a significant direct effect. Neglect ($\beta = .18$) and physical abuse ($\beta = .16$) had significant total effects, as did age ($\beta = .19$).

DISCUSSION

GTC purports that low self-control is the central cause of criminal behavior and other negative social outcomes. According to the theory, the failure to develop self-control is essentially due to problematic parenting. If a child is not adequately monitored and appropriately punished by an emotionally invested caregiver, then he or she does not learn to manage behavior and instead gives into impulses that may lead to risky behaviors and negative outcomes. Thus, the effect of parenting practices is distal to outcomes and should be mediated by self-control. Based on the review of the literature, it was hypothesized that childhood maltreatment and poor parental monitoring are antithetical to self-control. Furthermore, it was hypothesized that the effects of maltreatment and monitoring on criminal behavior, substance use, association with deviant peers, and physical victimization should be mediated through self-control.

Based on a sample of homeless young adults, the results reported here provide partial support for the hypotheses. Consistent with the expectation that poor parenting inhibits self-control, results revealed that the less monitoring a respondent had while growing up, the lower that person's cognitive self-control. In turn, the effect of monitoring on involvement in criminal behavior was partially indirect through cognitive self-control. Additionally, the earlier in life a person experienced physical abuse, the lower his or her cognitive self-control; age at first abuse, however, did not act indirectly through self-control on any negative outcome. Although the data could not be used to assess the persistence of abuse or neglect from childhood to adolescence, the results suggest that the timing and duration of abuse matter for the development of self-control, at least among those in this high-risk sample.

Neither of the other measures of childhood maltreatment, incidences of physical abuse and neglect, were linked to self-control. Rather, these factors had direct but specific effects on outcomes. Physical abuse was positively associated with substance use and associa-

tion with deviant peers. Neglect was positively associated with criminal behavior. Both physical abuse and neglect were linked to physical victimization. In the framework of the general theory, one could argue that victimization and substance use are themselves indicative of low self-control. Nevertheless, the theory cannot plainly account for why certain types of maltreatment should have specific, instead of general, effects.

Previous studies examining parenting effects have largely focused on criminal activity, finding that low self-control mediates part but not all of the effect of monitoring (e.g., Gibbs et al., 2003; Hay, 2001; Unnever et al., 2003, 2007). The results of the current study demonstrate that the restricted ability of self-control to act as a mediator extends to other negative social outcomes suggested by the general theory. In addition to criminal behavior, monitoring maintained direct effects on association with deviant peers and substance use, despite the relationship between monitoring and cognitive self-control. In this high-risk sample, cognitive self-control was but one factor that explained some, but not all, negative social outcomes. Monitoring and/or incidences of maltreatment were still important in understanding young adults' involvement in deviance and their victimization once on the streets.

In the current study, the respondent's frequency of running away was modeled as a behavioral indicator of low self-control. None of the parenting factors were significantly associated with running away behavior in the multivariate model, which counters the hypothesis that poor parenting contributes to low self-control. As a direct effect, however, frequency of running away contributed to greater involvement in criminal behavior, substance use, association with deviant peers, and victimization experiences. These particular results could be better interpreted within other theoretical frameworks. Rather than being viewed as an indicator of low self-control, number of times run could be viewed as a lifestyle or an opportunity variable. If a young person experiences trouble at home in late childhood or adolescence, running away from home may seem a viable option to escape further difficulties, even if only temporarily. Studies of homeless and other high-risk youth demonstrate that many of these young people have extensive histories of running away (Nesmith, 2006), and a combination of acute and chronic reasons may lead to a particular running episode (Whitbeck & Hoyt, 1999). The best predictor of running away is already having done so (Tyler & Whitbeck, 2004), so the measures included in the current study may not adequately capture the complexity of factors that lead to running away. Youth who run frequently may not only have greater opportunity for criminal behavior, but may also find that some involvement with deviant behavior and deviant peers is necessary for survival (Hagan & McCarthy, 1997; Tyler et al., 2001). These high-risk behaviors also increase the likelihood of homeless youth being victimized (B. A. Lee, Tyler, & Wright, 2010).

In sum, in the high-risk population examined in this study, self-control was but one factor related to negative social outcomes. Early abuse and lack of monitoring may undermine the development of cognitive self-control, while later problems may "trigger" behavioral responses like running away. In this study, the end result of maltreatment, lack of monitoring, and running away was greater involvement in criminal behavior, substance use, association with deviant peers, and victimization. The results support the conclusions of other researchers who argue that the negative social consequences of low self-control are not simply about the propensity of those with low self-control to gravitate to the street. Proximate causes also matter and should be considered in conjunction with GTC (Baron et al., 2007; Evans et al., 1997).

Limitations and Future Directions

The data were retrospective in nature and thus should be interpreted with caution. The respondents' recall of recent incidences of maltreatment may be more accurate than incidences occurring earlier in childhood. Respondents also may not accurately recall when maltreatment first began. In some cases, respondents indicated a very early age, prior to age 2, which suggests that they do not personally remember the event but were told about it by another party. Additionally, the study relied on youths' reports of their caretakers' monitoring. Inaccuracies may have resulted, but young people may also be in a better position to know how effective the monitoring actually was. In this sense, youths' reports may be valid (Meldrum, 2008). Ideally, future research should field a prospective study so that the occurrence of maltreatment and the associated family context could be more closely linked with the development of self-control.

Despite the limitations of the data, the results are salient because they focus on an understudied yet highly vulnerable population, on whom theories of crime and deviance are rarely tested. If GTC is indeed general, then its basic tenets should hold true across populations. The results indicated that this was not the case for this sample of homeless young adults. Rather, a major tenet of the theory—that the effect of poor parenting on negative social outcomes is entirely mediated by low self-control—received very modest support. Earlier age at first abuse contributed to lower self-control but had no indirect effect on outcomes. Monitoring influenced cognitive self-control but maintained significant direct effects. Additionally, physical abuse and neglect had no relationship with self-control and maintained specific direct effects. Running away behavior had the most general effect on outcomes, but results left room for alternative theoretical explanations.

The current study contributes to three trends in research interested in self-control theory. First, when it comes to the development of self-control, one trend advocates focusing on genetic contributions. The genetically informed studies of J. P. Wright and Beaver (2005; also J. Wright, Beaver, Delisi, & Vaughn, 2008) found that parenting factors were at best weakly related to self-control, indicating a genetic component may in fact supersede parenting factors. However, J. P. Wright and colleagues maintain that genetics and environment may interact in complex ways to influence both parenting behavior and the child's development. When it comes to the effects of maltreatment, J. Wright and Beaver (2005) write, "Parents may also create environments that are so bleak and abusive that the environmental effects overshadow any genetic influences" (p. 1189). Our study supports both positions: Parenting factors were not broadly related to self-control, but early abuse did exert an effect on cognitive self-control. Future studies should consider how extreme modes of parenting may aggravate (or inhibit) genetic expression.

Second, scholars have renewed interest in the role of opportunity in GTC (e.g., Hay & Forrest, 2008). Although Gottfredson and Hirschi (1990) posited that crime results when low self-control meets the opportunity for crime, they tended to dismiss the role of opportunity, instead viewing opportunity as ubiquitous. Several studies support the interaction of self-control and opportunity (Grasmick et al., 1993; LaGrange & Silverman, 1999; Longshore, 1998; Longshore & Turner, 1998). Hay and Forrest (2008) incorporated elements of routine activities theory (Osgood, Wilson, O'Malley, Bachman, & Johnston, 1996) in order to operationalize opportunity. Although running away behavior could be indicative of low self-control, the more frequently one has run away, the more often he or she has

spent time unstructured and unsupervised. Even in a high-risk population like homeless youth, where it might be assumed opportunities for deviance abound, the current study found variations. Future research should continue to explore how both self-control and opportunities for deviance may interact to produce negative outcomes.

Finally, in response to measurement issues, Hirschi (2004) has revised the conceptualization of self-control, shifting the emphasis from personality traits to the ability to make rational decisions by considering the consequences of one's actions. In short, someone with low self-control sees fewer costs for his or her actions and attaches little salience to the costs he or she does count. They discount the social bonds that might prohibit deviant actions. Lacking these inhibitions, the individual is more likely to make choices that result in deviance. Following Hirschi's (2004) suggestions for measurement, Piquero and Bouffard (2007) found support for this redefinition, which they alluded to as "situationally based self-control" (p. 21). In light of the current results, future research using Hirschi's redefined self-control should bear in mind how the experience of abuse may disrupt both socially normative inhibitions and interpretations of cost and salience and how the experience of homelessness may color such situational self-control.

The results of the current study inform the latter two trends. Indeed, other research on homeless youth from a general theory perspective advocates the importance of considering opportunity and decision making (Baron et al., 2007). Whether lack of parental monitoring, parental maltreatment, or other factors contribute to low self-control, once on the streets, youth are presented with numerous challenges for survival and opportunities for deviance. Under these circumstances, the notion of situational self-control may be better suited to understanding negative outcomes experienced by these youth. In making decisions about how to survive on the street, a person may be in a position of trying to meet an immediate need (e.g., shelter, food) with various legitimate and illegitimate opportunities. Lacking both the self-control and conventional bonds that prohibit such actions, this person may see few costs for his or her actions and attach little importance to the costs he or she does consider. In that situation, the illegitimate opportunity (e.g., criminal behavior) may be judged desirable. As research continues to explore the utility of the situational self-control concept, the results presented here regarding homeless youth indicate that it is important to consider distal causes like family relationships and proximate factors like opportunity for deviance in understanding negative social outcomes.

Appendix A

Cognitive Self-Control Measure

1. It's okay to get around the law if you can get away with it.
 2. Rules were made to be broken.
 3. To get ahead, you have to do some things that are not right.
 4. It's okay to take something from big business because they won't miss it anyway.
 5. Only fools tell the truth all of the time.
 6. I see no need for hard work.
 7. When I get caught in a lie, I just tell another one.
 8. I try to get things I want even if I know it's causing problems for other people.
-

Appendix B

Correlations (N = 172)

	Gender	Race	Age	Monitoring	Age at First Physical Abuse	Physical Abuse	Neglect	Low Cognitive Self-Control	Number of Times Ran Away	Criminal Behavior	Substance Use	Deviant Peers
Gender	1.000											
Race	-0.075	1.000										
Age	-0.138	-0.020	1.000									
Monitoring	0.162*	-0.014	0.033	1.000								
Age at first physical abuse	-0.202**	-0.110	0.004	0.026	1.000							
Physical abuse	-0.082	0.135	0.048	-0.267**	-0.129	1.000						
Neglect	0.094	0.067	0.025	-0.222**	-0.443**	0.474**	1.000					
Low cognitive self-control	-0.118	0.009	-0.019	-0.344**	-0.131	0.179*	0.081	1.000				
Number of times ran away	0.199*	-0.007	-0.026	-0.107	-0.072	0.096	0.211**	-0.051	1.000			
Criminal behavior	-0.079	0.085	0.225**	-0.326**	-0.086	0.294**	0.298**	0.280**	0.327**	1.000		
Substance use	-0.212**	0.084	-0.016	-0.371**	-0.015	0.302**	0.212**	0.243**	0.175*	0.524**	1.000	
Deviant peers	-0.247**	0.082	0.208**	-0.342**	-0.112	0.282**	0.225**	0.233**	0.118	0.519**	0.457**	1.000
Victimization	-0.019	0.096	0.198*	-0.056	-0.184*	0.260**	0.303**	0.062	0.276**	0.506**	0.177*	0.394**

*p < .05 (two-tailed). **p < .01 (two-tailed).

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