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Self-Control in Context: How Hopelessness Shapes the Effect of Self-Control on Adolescent Delinquency

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ABSTRACT

The rising rates of hopelessness among American youths are drawing increased attention to its relationship with risky behaviors, including crime and delinquency. However, identifying the precise mechanisms underlying this relationship remains complex. This study investigates how variations in self-control, influenced by levels of hope or hopelessness, can account for differences in susceptibility to delinquency. To test this hypothesis, we use a nationally representative sample of youths from the Add Health study ($N = 7{,}999$).

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Recent reports have documented that hope loss and psychological stress indicative of hopelessness are on the rise among youths in the United States (NCCDPHP 2023). According to the Youth Risk Behavior Survey (2023), which questioned youths about prolonged feelings of sadness and hopelessness in 2021, 42% of high school students felt sad or hopeless almost every day for two or more consecutive weeks to the extent that they ceased their usual activities – an increase from 26% in 2009.

The rising rate of hopelessness is especially alarming given research showing a relationship between hopelessness and crime/delinquency (e.g., Bolland 2003; Valencia et al. 2021; Yeager et al. 2011). In a recent longitudinal study, Valencia et al. (2021) showed that youths' feelings of hopelessness are positively associated with violent crime over time. Moreover, numerous studies have demonstrated a link between youths' feelings of hopelessness and risky behaviors, including perpetration of interpersonal violence (Duke et al. 2011), victimization (Busch et al. 2015), and intentional self-harm (Huen et al. 2015). However, the complexities of the relationship between hopelessness and crime/delinquency within the existing literature requires additional inquiry.

One possibility to explore the hopelessness-delinquency link is to consider how self-control may enhance our understanding of this relationship. Gottfredson and Hirschi's (1990) general theory of crime contends that self-control can serve as a buffer, limiting delinquency before it happens. When exposed to criminal opportunities – typically measured by the prevalence of crime-prone areas where hopelessness is expected to be highest – youths with high self-control are thought to be less likely to engage in crime and delinquency due to their ability to consider long-term consequences and effectively regulate impulses. However, findings in this area have been unexpectedly inconsistent (Anderson et al. 2015; Gibson 2012; McDermott et al. 2017; Vazsonyi and Klanjšek 2008; Zimmerman et al. 2015).

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To untangle this paradox, the present study contends that criminal opportunity is less about availability and more about perception – particularly in the form of hopelessness. Youths with high hopelessness are pessimistic, distrustful, and burdened by safety concerns, making it challenging for them to identify non-criminal opportunities (Valencia et al. 2021). Nonetheless, youths with high self-control may still be less inclined to engage in delinquent behavior, even when they lack hope, because they are better able to consider the consequences of their actions (Wright et al. 2001). In contrast, hopeful youths are optimistic, enthusiastic, and trust that their decisions will lead to positive outcomes (Scioli et al. 1997). For hopeful youths with high self-control, the conventional opportunities they perceive may become even more significant, further reducing their likelihood of engaging in delinquency.

Drawing on a nationally representative sample of youths ($N = 7{,}999$) from the National Longitudinal Study of Adolescent to Adult Health (Add Health) survey, the present study contributes new theoretical insights into the general theory of crime by showing how youths' level of self-control interacts with their level of hopelessness to influence the likelihood of engaging in delinquent behavior.

Crime in context: hopefulness and hopelessness

Hope and hopelessness are often conceptualized along a continuum (Requero, Briñol, and Petty 2023; c.f.; Huen et al. 2015). Hope is described as the "anticipation of a future which is good, based on mutuality, a sense of personal competence, coping ability, psychological well-being, purpose and meaning in life, and a sense of the possible" (Miller and Powers 1988:6). Hope encompasses a blend of expectations for various day-to-day outcomes, rather than being solely viewed as an anticipation of major positive future events.

On the contrary, hopelessness is described as "an expectation that highly desired outcomes will not occur or that negative ones will occur . . . , and that nothing is going to change things for the better . . . " (Joiner and Wagner 1995:778). Hopelessness is characterized by a broad interpretation of life that results in negative expectations about desired and significant outcomes. It also includes a feeling of powerlessness regarding the ability to alter the probability of these outcomes from happening (Spirito et al. 1988).

Studies have shown that hope is generally linked to positive life outcomes, including improved problem-solving abilities (Anderson and Feldman 2020), the pursuit of healthier lifestyles (Carver, Scheier, and Segerstrom 2010), better educational and income outcomes (Goldsmith, Veum, and Darity 1997), and even a decrease in late-life mortality (Giltay et al. 2004). Individuals who hold high hopes for their future tend to be goal-oriented and active, characteristics that often lead to superior work performance and, consequently, greater self-esteem (Bury, Wenzel, and Woodyatt 2016). Moreover, hope has been found to be a protective factor against suicide and other self-injurious behaviors among a sample of patients with depression, lowering the likelihood of suicide attempts (Luo et al. 2020).

Conversely, youths who feel hopeless about the future are found to engage in various forms of delinquent, reckless, and violent behavior (e.g., Bolland 2003; Valencia et al. 2021; Yeager et al. 2011). Duke et al. (2011:87) found that youths with moderate to high levels of hopelessness were prone to various violent actions, including delinquent behavior, carrying weapons on school premises, and all forms of self-inflicted violence. In a study of poor, black, inner-city youth, Bolland (2003) found that, although hopelessness was present in only a quarter of the youths sampled, it was a strong predictor of engaging in fights or carrying weapons. These results suggest that uncertainty about the future (i.e., feelings of hopelessness) may play a significant role in pathways to criminal and delinquent behaviors in the lives of youths.

Self-control and crime

Gottfredson and Hirschi (1990) describe self-control as an individual level characteristic that makes some individuals more susceptible to offending behavior. Self-control refers to "the tendency to avoid acts whose long-term costs exceed ... short-term benefits" (Hirschi and Gottfredson 2001: 83). More recently, Hirschi (2004) broadened this concept to emphasize an individual's tendency to consider the consequences of his/her behaviors which implies that self-control is comprised of a set of inhibitions. Consistent with this idea, numerous studies have linked high self-control to a successful and healthy lifestyle, marked by enhanced psychological well-being, academic achievement, and interpersonal relationships (Hay and Meldrum 2015). Individuals with high self-control are generally thought to fully anticipate the negative consequences of criminal acts and thus are deterred by the delayed formal and informal costs of crime (Gottfredson and Hirschi 1990).

Individuals with low self-control, however, are more "inclined to follow momentary impulse without consideration of the long-term costs of [criminal] behavior" (Gottfredson and Hirschi 1990:-190–91). Consequently, [non]criminal behavior likely exists on a continuum, with high self-control individuals at one end possessing nearly complete rational choice and self-control abilities in their actions, thus avoiding crime. On the opposite end, low self-control individuals are exhibit relatively less rational choice and self-control abilities, making offending behavior a more common occurrence.

Self-control and crime in context

Research examining self-control and social disadvantage suggests that self-control may act as a buffer for youths depending on their social context, such as neighborhood conditions or exposure to opportunities for crime (Anderson et al. 2015; Gibson 2012; McDermott et al. 2017; Vazsonyi and Klanjšek 2008; Zimmerman et al. 2015). Anderson et al. (2015) showed that youths with high self-control from moderately disadvantaged neighborhoods exhibited fewer antisocial behaviors compared to youths with low self-control. Gibson (2012) similarly observed that victimization was greater among low self-control youths (compared to high self-control youths) from advantaged neighborhoods. What is most striking about these studies, however, is that the relationship between self-control and risky behaviors was minimal to non-existent in locations where the effects of self-control should be more pronounced: disadvantaged neighborhoods.

One approach to addressing this paradox is to adjust Gottfredson and Hirschi's theory of self-control, focusing instead on hopelessness, a key cognitive framework (see Bolland 2003 for details), rather than contextual criminal opportunities. Youths with high hopelessness are pessimistic, distrusting, and fail to find meaning in their lives (Huen et al. 2015). When faced with complex and challenging circumstances, such as poverty, family conflict, and exposure to violence, these youths have trouble envisioning their future as promising, do not anticipate positive outcomes, and are unable to make decisions that will benefit them in the long term (Lorion and Saltzman 1993). Similar to the notion of a siege mentality (Gold 2020), hopelessness makes youths more attuned to the risks in their lives, placing threats and exploits are at the forefront of their minds. By reframing opportunity as hopelessness, the present study better captures crime prone cognition unhindered by geographical locations.

Self-control and hopelessness

A mind-set marked by pessimism, distrust, and a lack of purpose – common among highly hopeless youths – leads to significant psychological issues, such as emotional instability, chronic stress, anxiety, and depressive symptoms (Arnau et al. 2007). When combined with low self-control, youths engage more frequently in substance abuse and aggression, which serve as coping mechanisms for their immediate emotional distress (Wilson et al. 2005).

Conversely, high self-control may still act as a form of "social protection" against delinquency for youths experiencing high hopelessness (Wright et al. 2001). Youths with high self-control understand the consequences of their actions. They know that risky behaviors can lead to physical injury or trouble with others (Hirschi 2004). To avoid these negative outcomes, they exercise restraint when faced with tough choices or develop strategies to avoid confrontation (Burt 2020).

Nevertheless, prolonged and intense feelings of hopelessness can alter the behavior of even those youths with high self-control. According to Lorion and Saltzman (1993:56), "socially unacceptable and risky alternatives" may seem particularly appealing under such emotional strain. Sustained negative emotions like hopelessness may narrow their perceived choices, fostering a belief that risky behaviors are the only available solutions (Van Gelder 2017). Under such pressures, even youths with high self-control may feel they have little to lose, prompting them to engage in behaviors that offer a temporary escape, despite potential risks.

Self-control and hopefulness

Existing research demonstrates that a strong sense of hope typically leads to positive outcomes for youths, as it enables them to visualize their future and maintain optimistic expectations for success (Luo et al. 2020; Scioli et al. 1997). Chen and Vazsonyi (2011) provide evidence that, while low self-control typically leads to delinquent behaviors, the presence of a prosocial mind-set – often perceived as hopeful – offers significant "social protection" against such behaviors. While these youths are still prone to risky behaviors, their actions are relatively benign, limited to recreational injuries or petty theft (Requero, Briñol, and Petty 2023). Therefore, even among youths with low self-control, a sense of hopefulness may act as a deterrent against engaging in risky behaviors and delinquency.

Ultimately, youths endowed with high self-control and aspirations consistent with societal norms are likely to be more successful in achieving their lifegoals and avoiding risky behaviors and delinquency. This effectiveness stems from their ability to comprehensively assess the consequences of their actions (i.e., high self-control), and understand that such behaviors could compromise their prospects for success in life, of which there are many.

The present study

The present study contributes to the theoretical and empirical understanding of self-control on delinquency by accounting for hopelessness – a crucial factor accounting for how youths perceive the opportunities available to them. For hopeful youths with greater self-control, the conventional opportunities they perceive become even more pronounced (Klausner, Snyder, and Cheavens 2000), and these youths are less inclined to engage in delinquency. For youths with high hopelessness, however, non-criminal opportunities are difficult to recognize (Burt 2020), restricting their choices, even among youths with greater self-control (Wright et al. 2001). Based on this logic, the present study proposes the following hypotheses about the interaction between hopelessness and self-control on delinquency.

Hypothesis 1: For low hopelessness youths, the greater the self-control, the less delinquency.

Hypothesis 2: For high hopelessness youths, the greater the self-control, the less delinquency.

Hypothesis 3: The difference in the effect of self-control on delinquency will be greater for youths with low hopelessness than youths with high hopelessness.

Data and methods

Add health data

This study utilizes the first two waves of the National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the relationship between hopelessness, self-control, and delinquency. Add Health is a multi-wave panel study of youths in grades 7–12 that was first initiated in 1994–95. A two-stage stratified sampling design was employed to select 80 high schools and 52 middle schools across the United States. Systematic sampling methods were used to ensure that the sample was representative of U.S. schools regarding geographic region, urban or rural setting, school size, school type, and ethnic diversity. Follow-up data for Wave II were collected one year later, comprising over 14,700 youths, which represents 88% of the Wave I respondents. Since Wave III was conducted five years later, and prior research supports the notion that psychological states like hope or hopelessness are more predictive of delinquent behavior when measured in the short term – with their predictive power decreasing over longer intervals (Huen et al. 2015; Remster 2014; Valencia et al. 2021) – the present study utilizes data exclusively from the first two waves to highlight its temporal impact on delinquent behavior and the need for timely measurement.

The final sample size for the present study consists of 7,999 youths. This sample represents respondents who were interviewed at Waves I and II, had valid Add Health sample weights, no missing data on study and control variables, and were aged 12–19 at Wave I. By applying the appropriate Add Health Wave II sample weights, this study addressed issues of non-response and attrition between Waves I and II, thereby obtaining unbiased estimators and accurate standard errors (Chantala 2006). Youths with missing data were excluded through listwise deletion, leading to the final sample size (Allison 2001). This methodology adheres to the guidelines provided by Add Health administrators and is consistent with other studies utilizing the same dataset (Remster 2014, Chen and Chantala 2014; Timmer, Antonaccio, and French 2021). Additionally, the models accounted for clustering within schools and the oversampling of specific groups by using the appropriate Wave II sample weights.

Study variables

Self-Control. Self-control was drawn from Gottfredson and Hirschi's (1990) definition of self-control, which is seen as a single, unidimensional trait consisting of six distinct subdomains: being impulsive, insensitive, physical, risk-taking, short-sighted, and nonverbal. Since the Add Health data lacked a specific instrument to measure self-control, this study applied a 5-item composite measure developed by Perrone et al. (2004). This measure was chosen for two key reasons. First, it offers a self-control assessment that combines cognitive and behavioral elements. Prior research suggests that these components have comparable effects on crime and delinquency, further supporting the integrated approach (Tittle, Ward, and Grasmick 2003). Second, the 5-item measure successfully captures items that reflect core dimensions of self-control (see Perrone et al. 2004 for further details). For example, youths reported the frequency with which they experienced difficulties in (1) getting along with teachers, (2) staying focused, (3) completing homework, and (4) paying attention in school (0 = Never, 1 = Just a few times, 2 = About once a week, 3 = Almost every day, 4 = Every day). These four items reflect youths' impulsivity and preference for physical and simple activities. Additionally, youths self-reported how often they felt they did "everything just about right" (0 = Never/rarely, 1 = Sometimes, 2 = A lot of the time, 3 = Most/all of the time), which reflects their tendency toward self-centeredness. These items were summed together in a self-control scale, with higher values reflecting greater levels of self-control (Cronbach's alpha = 0.69). This abbreviated self-control measure has also been adopted in similar studies utilizing Add Health data (e.g., Timmer, Antonaccio, and French 2021; Beaver 2008), making the present study more consistent with existing research.

Delinquency Wave II. The present study uses a summative delinquency index from the in-home survey at Wave II. The index is composed of 12 survey items, each probing participation in various delinquent behaviors over the past year. These activities include: "Paint graffiti or signs on someone

else's property or in a public place," "Deliberately damaging property that did not belong to you," "Taking something from a store without paying for it," "Getting into a serious physical fight," "Hurt someone badly enough to care from a doctor or nurse," "Driving a car without its owner's permission," "Stealing something worth more than $50," "Going into a house or building to steal something," "Using, or threatening someone, with a weapon," "Selling marijuana or some other drug," "Acting loud, rowdy, or unruly in a public place," and "Taking part in a fight where a group of your friends was against another group." Responses were originally scored on an ordinal scale ranging from 0 (Never) to 3 (Five or more times), with higher scores indicating more frequent delinquent involvement (Cronbach's alpha = .82). This type of index has been previously used and validated in studies utilizing Add Health data (e.g., Timmer, Antonaccio, and French 2021).

Hopelessness. The independent variable of primary interest, hopelessness, was formulated at Wave I, utilizing a four-item scale developed by Valencia et al. (2021). Specifically, youths were asked to indicate how often they agreed with the following two statements in the last week: "You felt hopeful about the future" and "You felt life was not worth living." These two questions are intended to capture the general feelings of hopelessness, reflecting a person's emotional state of despair and negative perception of life's value (Fletcher 2020; Valencia et al. 2021). Responses to these items ranged from 0 (Never/rarely) to 3 (Most/all of the time). The first question was reverse coded so that higher responses indicated higher levels of hopelessness. Additionally, youths were asked: "What do you think are the chances that you will live to age 35?" and "What do you think are the chances that you will be killed by age 21?" These two questions relate to youths' perceptions of their chances of living to specific ages. A lower expectation of reaching these ages reflects feelings of hopelessness, pessimism, or a perceived lack of control over their future (Borowsky, Ireland, and Resnick 2009; Swisher and Warner 2013). Responses to these items ranged from 0 (Almost no chance to) to 4 (Almost certain). Similarly, reverse coding was applied to the "live to age 35" responses, so that higher values indicate more hopelessness. Altogether, these four questions were combined to form a composite measure of hopelessness (Cronbach's alpha = .50). This scale is consistent to hopelessness scales used previously with Add Health data (e.g., Iratzoqui 2015; Russell and Toomey 2013; Valencia et al. 2021).

Control variables

The analyses include a range of variables that are theoretically and empirically linked to delinquency. Specifically, the controls encompass sociodemographic and social structural factors, opportunities for delinquent activities, and aspects of social bonding available in the Add Health dataset (Akers 1973; Aneshensel and Sucoff 1996; Cloward 1959; Hirschi 1969; Sutherland 1939). Existing research shows that social structural factors like family structure, parental education, and public assistance reliance shape youth environments and delinquency by affecting supervision levels, resource accessibility, and risk exposure (Hoffmann 2006; McLanahan and Sandefur 1994; Sampson and Laub 1994). Moreover, exposure to delinquent peers, inadequate parental supervision, and neighborhood hostility are known to create crime opportunities, increasing delinquency by encouraging risky behaviors and weakening social cohesion (Demuth and Brown 2004; Haynie 2002; Sampson and Groves 1989; Sampson and Laub 1994). It is also well established that the strength of social bonds, such as attachment, commitment, involvement, and beliefs, is strongly related to delinquency (Hirschi 1969).

The sociodemographic and social structural variables measured at Wave I consisted of: Age (the respondent's ages in years at Wave I), Gender (0 = Male, 1 = Female), and Race (1 = White, 0 = Non-white). Parental education was employed as a proxy for household socio-economic status and measured as the highest level of education completed by the respondent's parent or parent's partner, if present. The receipt of Public assistance by resident parents was assessed with the item "Does she/he receive public assistance, such as welfare?" Responses to this item were coded 0 if No assistance and 1 if receiving Assistance. Biological parents were determined based on whether a respondent resided with both biological parents, coded as 1 for Lives with two biological parents and 0 for Lives with one or none. Respondent Location was set as 1 = Urban and 0 = Non-

urban. Finally, we constructed a measure of prior delinquency, Delinquency Wave I, which consists of the same delinquency items used to construct Delinquency Wave II (Cronbach's alpha = .83).

Control measures of opportunities for criminal behavior include exposure to Delinquent peers, Parental supervision, and Neighborhood hostility as measured at Wave I. For Delinquent peers, youths who took the survey were asked "Of your 3 best friends, how many drink alcohol at least once a month?" Responses to this item ranged from 0 to 3. Parental supervision was measured using the items "How often is she [mother] at home when you leave for school?" and "How often is she [mother] at home when you return from school?" Possible response options consisted of 1 (Always) through 5 (Never). Responses to the parental supervision items were reversed coded so that larger values indicated more supervision (Cronbach's alpha = .63). Youths were also asked about their neighborhood hostility using the items 1) "You know most of the people in your neighborhood," 2) "In the past month, you have stopped on the street to talk with someone who lives in your neighborhood," 3) "People in this neighborhood look out for each other," 4) "Do you usually feel safe in your neighborhood?," and 5) "On the whole, how happy are you with living in your neighborhood?" For items 1–3, responses of True were coded 1 and False were coded 0. The response options on the survey for the fourth item were also dichotomous (0 = No and 1 = Yes). And the final item ranged from 1 = Not at all to 5 = Very much. Before combining these items, they were reverse coded so that larger values indicate a more hostile neighborhood (Cronbach's alpha = .60).

Social bonds were accounted for using five self-report social bonding measures: attachment to parents, attachment to school, school commitment, religious involvement, and job involvement. Parental attachment was measured using eight items inquiring how much respondents agreed with the following statements: "How close do you feel to your mother," "How close do you feel to your father," "Most of the time, your mother is warm and loving toward you," "Most of the time, your father is warm and loving toward you," "How much do you feel that people in your family understand you?," "How much do you feel that your parents care about you?," "How much do you feel that you and your family have fun together?," and "How much do you feel that your family pays attention to you?" Each item was measured on a 5-point rating scale, ranging from 1 = Strongly disagree to 5 = Strongly agree. The scale exhibits a high level of internal consistency (Cronbach's alpha = .84) and was coded so that higher scores indicated higher reported levels of parental attachment. School attachment was measured using five questions inquiring about how much respondents agreed with the following statements: "You feel close to people at your school," "You feel like you are part of your school," "You are happy to be at your school," "You feel safe in your school," "The teachers at your school treat students fairly." Each variable was coded from 1 = Strongly disagree to 5 = Strongly agree. Higher values indicated higher reported levels of school attachment (Cronbach's alpha = .78). School commitment was measured using five questions including "How much do you want to attend college?" which had response categories ranging from 1 = Low interest to 5 = high interest; "What is your most recent grade in (math, science, history, and English)?" which asked respondents about the grade that they received and was coded from 1 = D to 4 = A. Higher scores indicated stronger school commitment (Cronbach's alpha = .72). Religious involvement was measured using the following three variables: "In the past 12 months, how often did you attend religious services?" (1 = Not important at all, 2 = Fairly unimportant, 3 = Fairly important, 4 = Very important); "How often do you pray" (1 = Never, 2 = Less than once a month, 3 = At least once a month, 4 = At least once a week, 5 = At least once a day); and "How important is religion to you?" (1 = Never, 2 = Less than once a month, 3 = Once a month or more/less than once a week, 4 = Once a week or more). Higher scores indicated greater religiosity (Cronbach's alpha = .74). Lastly, Job involvement was measured using the question "In the last 4 weeks, did you work – for pay – for anyone outside your home?" To this item, youths either responded Yes (1) or No (0).

Data analysis strategy

Our analysis tested the proposed hypotheses on four models with and without control variables (Stata 18) applied to the Add Health data. We chose negative binomial regression for its effectiveness in handling outcome measures like Delinquency Wave II, characterized by count data with overdispersion or notable variance in their distribution (Long 1997; Osgood et al. 1996). The analysis incorporates Wave II sample weights and adjusts standard errors to mitigate the effects of school-based data clustering, oversampling, and attrition. The interaction effect between hopelessness and self-control on delinquency was further analyzed using marginal effects and then these marginal effects were contrasted to examine how the effect of self-control on delinquency differs by level of hopelessness. Multicollinearity was checked as described by Goldberger (1991). No major violations were observed. Standard Errors for all variables were within tolerance, indicating that none of the standard errors were inflated due to multicollinearity, heteroscedasticity, sample size, or model misspecification.

Results

Table 1 shows descriptive statistics for the $N = 7{,}999$ youths after applying survey weights.

Table 1. Descriptive statistics with survey weights for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999).

Variables	Percentage	
Biological parents		
Lives with two	60.782	
Lives with one or none	39.218	
Gender		
Female	50.877	
Male	49.123	
Job involvement		
Employed	58.368	
Not employed	41.632	
Location		
Urban	28.957	
Non-urban	71.043	
Public assistance		
Assistance	8.828	
No assistance	91.172	
Race		
White	71.661	
Non-white	28.339	
Variables	M	SD
Age	14.337	1.582
Delinquency Wave I	2.838	3.873
Delinquency Wave II	2.137	3.369
Delinquent peers	1.013	1.15
Hopelessness	9.352	1.411
Neighborhood hostility	7.188	1.669
Parental attachment	31.557	5.931
Parental education	4.639	2.036
Parental supervision	7.014	2.629
Religious involvement	9.089	4.134
School attachment	18.817	3.739
School commitment	15.414	3.804
Self-control	14.04	3.25

Table 2. Bivariate correlations with survey weights for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999).

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Age	1.00												
(2) Delinquency Wave I	0.01	1.00											
(3) Delinquency Wave II	−0.06*	0.58*	1.00										
(4) Delinquent peers	0.26*	0.31*	0.22*	1.00									
(5) Hopelessness	0.01	0.12*	0.10*	0.09*	1.00								
(6) Neighborhood hostility	−0.11*	−0.09*	−0.05*	−0.05*	−0.10*	1.00							
(7) Parental attachment	−0.11*	−0.21*	−0.14*	−0.17*	−0.14*	0.29*	1.00						
(8) Parental education	−0.06*	−0.01	0.00	−0.04*	−0.06*	0.02*	0.06*	1.00					
(9) Parental supervision	0.04*	−0.04*	−0.04*	−0.01	−0.01	0.04*	0.05*	−0.17*	1.00				
(10) Religious involvement	−0.06*	−0.11*	−0.09*	−0.12*	−0.07*	0.12*	0.16*	0.05*	0.00	1.00			
(11) School attachment	−0.10*	−0.24*	−0.16*	−0.17*	−0.17*	0.32*	0.32*	0.04*	0.03*	0.13*	1.00		
(12) School commitment	−0.21*	−0.21*	−0.16*	−0.21*	−0.10*	0.12*	0.21*	0.23*	−0.04*	0.18*	0.25*	1.00	
(13) Self-control	−0.04*	−0.40*	−0.30*	−0.24*	−0.18*	0.17*	0.27*	0.02	0.04*	0.11*	0.40*	0.31*	1.00

*$p < .05$.

Table 3. Negative binomial regression statistics with survey weights predicting delinquency wave II on interaction between self-control and hopelessness controlling for social-structural, criminal opportunity, and social bond variables for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999).

	Model 1			Model 2			Model 3			Model 4		
Variables	b	SE	p	b	SE	p	b	SE	p	b	SE	p
Intercept	2.962	(.645)	<.001	3.727	(.617)	<.001	3.847	(.578)	<.001	4.381	(.624)	<.001
Hopelessness	−.043	(.061)	.478	−.132	(.045)	.004	−.123	(.041)	.003	−.114	(.043)	.009
Self-control	−.173	(.051)	.001	−.158	(.033)	<.001	−.146	(.030)	<.001	−.128	(.030)	<.001
Hopelessness X self-control	.004	(.005)	.389	.010	(.003)	.001	.010	(.003)	.001	.009	(.003)	.006
Age				−.093	(.016)	<.001	−.118	(.017)	<.001	−.129	(.017)	<.001
Gender[a]				−.236	(.038)	<.001	−.248	(.037)	<.001	−.251	(.036)	<.001
Race[b]				−.055	(.058)	.342	−.070	(.057)	.227	−.073	(.058)	.207
Parental education				.001	(.013)	.947	−.002	(.013)	.904	.005	(.012)	.700
Public assistance[c]				−.190	(.079)	.018	−.188	(.071)	.009	−.213	(.071)	.003
Biological parents[d]				−.101	(.047)	.035	−.083	(.047)	.080	.012	(.057)	.829
Location[e]				.042	(.055)	.442	.053	(.054)	.329	.058	(.053)	.275
Delinquency Wave I				.150	(.008)	<.001	.141	(.008)	<.001	.138	(.008)	<.001
Parental supervision							−.007	(.008)	.362	−.007	(.008)	.408
Neighborhood hostility							.007	(.014)	.613	.018	(.014)	.199
Delinquent peers							.116	(.022)	<.001	.101	(.021)	<.001
Religious involvement										−.010	(.005)	.065
Job involvement[f]										.030	(.042)	.475
Parental attachment										−.014	(.005)	.006
School attachment										.001	(.007)	.887
School commitment										−.016	(.006)	.014

[a]0 = male, 1 = female. [b]0 = nonwhite, 1 = white. [c]0 = no assistance, 1 = assistance. [d]0 = lives with one or none, 1 = two. [e]0 = non-urban, 1 = urban. [f]0 = not employed, 1 = employed.

Table 4. Average marginal effect statistics with survey weights predicting delinquency wave II on self-control for low and high levels of hopelessness controlling for social-structural, criminal opportunity, and social bond variables for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999).

	b	SE	p
Hopelessness			
Hopeful	−.344	.105	.001
Hopeless	−.09	.022	<.001

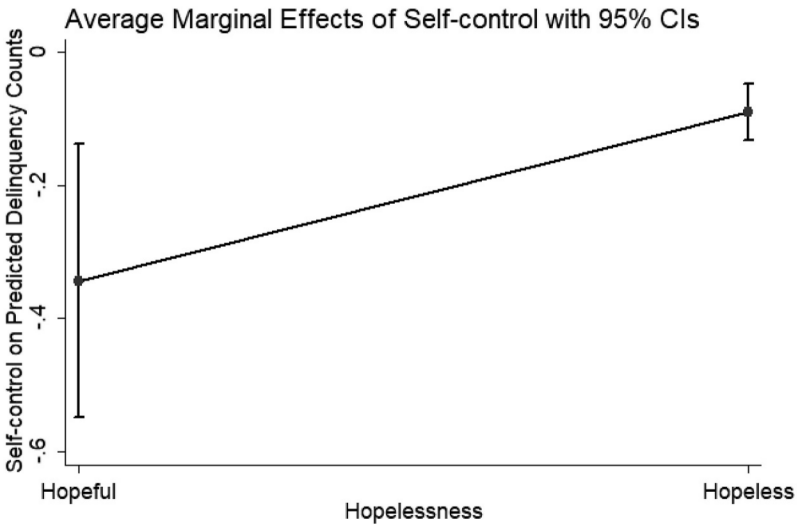

Figure 1. Average marginal effects plot with survey weights predicting general delinquency at wave II on self-control for low and high levels of hopelessness controlling for social-structural, criminal opportunity, and social bond variables for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999). *Note*. CI = confidence interval.

Table 5. Contrast of marginal effect statistics with survey weights predicting delinquency wave II on self-control between low and high levels of hopelessness controlling for social-structural, criminal opportunity, and social bond variables for youths from the national longitudinal study of adolescent to adult health survey (N = 7,999).

	b	SE	95% CI	
			LL	UL
Hopelessness				
Hopeless – Hopeful	.254	.115	.029	.479

CI = confidence interval; LL = lower limit; UL = upper limit.