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The other side of the coin: Exploring the effects of adolescent delinquency on young adult self-control

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ABSTRACT

Purpose: Although there is robust support for low self-control as a predictor of delinquent behavior, the question of whether delinquent behavior impacts self-control has been largely ignored. We ask, after accounting for baseline group differences in impulsivity and self-control, can delinquency be associated with later group differences in self-control?

Methods: Utilizing data from the National Longitudinal Study of Adolescent to Adult Health we employed propensity score matching to create comparable groups (i.e., on self-control and other delinquency correlates) of youth who did and did not participate in delinquent behavior in adolescence and compared them on self-control and impulsivity in later waves.

Results: Despite baseline similarity, the groups identified as delinquent at Wave II differed significantly from non-delinquent groups on self-control and impulsivity at Waves III and IV. Both groups experienced improvement in self-control and impulsivity over time though improvement was more marked for the non-delinquent youth.

Conclusions: We have established preliminary evidence that delinquent behavior may be associated with later levels of self-control. Participation in delinquency may remove youth from normal developmental patterns in which self-control strengthens over time. Future research should attempt to replicate our findings and determine the specific mechanisms through which delinquent behavior may impact later self-control.

The state of research on self-control and delinquency provides robust evidence that individuals with lower self-control are more likely to participate in delinquent behavior (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012; Pratt & Cullen, 2000; Vazsonyi, Mikuška, & Kelley, 2017). Grey areas remain, however, when it comes to fully understanding the longer-term nature and development of self-control and the nuances of its relationship to delinquency over time. Much of the research on self-control is limited to cross-sectional analysis (Vazsonyi et al., 2017), posing some uncertainty about the direction and pattern of relationships over time. Beyond the fact that low self-control predicts delinquent behavior, little is known about the extent to which participation in delinquent behavior has an independent effect on self-control, (see exception, de Kemp et al., 2009) and the degree to which these concepts are interrelated over the life course. While we do not question the ubiquitous finding that levels of self-control impact deviant and related behaviors, we do find it interesting that few have questioned the possibility that participation in such behaviors may also impact self-control. We want to contribute to the understanding of self-control and delinquency by exploring the other side of the coin. Specifically, just as self-control influences delinquency, can delinquency also influence self-control?

The long-held stability assumption (Gottfredson & Hirschi, 1990) of self-control likely explains the lack of research into predictors, including delinquency, of self-control beyond childhood. Despite recent evidence that self-control is not, in fact, completely stable for all individuals (Burt, Simons, & Simons, 2006; Burt, Sweeten, & Simons, 2014; Hay & Forrest, 2006; Na & Paternoster, 2012), potential factors leading to instability have yet to be unpacked. We turn to delinquency because of its history of relationship to self-control and because it is not uncommon for developmental factors in adolescence to perform multiple roles, serving both as predictor and outcome (e.g., parenting and externalizing behaviors; Burke, Pardini, & Loeber, 2008; Choe, Olson, & Sameroff, 2013). Further, because self-control has been so consistently linked to measures of delinquency and criminal behavior

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(Pratt & Cullen, 2000; Vazsonyi et al., 2017), and because delinquency follows a varied, yet relatively predictable, pattern in the transition to adulthood (i.e., age-crime curve; Hirschi & Gottfredson, 1983; Sampson & Laub, 2003), it makes sense to explore whether self-control follows a similar pattern of predictability (Pratt, 2016). Utilizing data that spans adolescence through young adulthood, we seek to contribute to the understanding of self-control and delinquency by exploring the role adolescent delinquency plays in the development of self-control in early adulthood. In what follows, we discuss self-control research and whether interrelated factors (i.e., delinquency) should impact the stability of between-person levels of self-control.

1. The general theory of crime and other models of self-control

Until recently, the primary theoretical framework associated with self-control in criminological research has been the general theory of crime (Gottfredson & Hirschi, 1990). Self-control was initially defined as the "relatively stable differences across individuals in the propensity to commit criminal (or equivalent) acts" (Gottfredson & Hirschi, 1990, p. 137) and later conceptualized as differences in the "tendency to consider the full range of potential costs of a particular act" (Hirschi, 2004, p. 543). According to the general theory of crime, self-control develops early in life in response to parental socialization efforts. Specifically, effective self-control is developed among children whose parents, successfully monitor, recognize and punish deviant behavior (Gottfredson & Hirschi, 1990; Perrone, Sullivan, Pratt, & Margaryan, 2004; Unnever, Cullen, & Pratt, 2003). According to Gottfredson and Hirschi (1990), however, parenting effects are constrained to the early years. Individuals may experience small improvements in absolute levels of self-control over time, but ranking on self-control in comparison to others is not expected to change after late childhood (Gottfredson & Hirschi, 1990). Gottfredson and Hirschi's model is similar to other models (e.g., delay of gratification, discounting model of impulsiveness; Ainslie, 1975; Mischel & Underwood, 1974) that describe self-control as the ability to resist temptations of short-term rewards and make decisions that favor more important, longer-term outcomes (de Ridder et al., 2012). So, while the general theory of crime has dominated criminological research over the past three decades, it is worth exploring briefly other models of "self-control" as they pertain to the stability of self-control across the life-course.

1.1. Strength model of self-control

The self-regulatory strength model (Baumeister & Heatherton, 1996) is more well-known in psychology than in criminology though recent research in the field has begun to acknowledge and incorporate this model as well (e.g., Burt et al., 2006; Meldrum, Barnes, & Hay, 2015; Muraven, Pogarsky, & Shmueli, 2006). A key difference from the general theory of crime is that the strength model describes self-control not as a stable trait but more similar to a muscle. When framed this way, people have limited energy resources in applying self-control in the short-term, yet individual self-control can also be shaped in response to training over time (Baumeister & Heatherton, 1996; Baumeister, Vohs, & Tice, 2007). In the short-term, self-control is thought to be a finite resource that can be depleted when accessed. In particular, if people have simultaneous and/or repetitive demands on their self-control, then they are more likely to experience self-regulation failure due to exhaustion of the limited resource (Baumeister & Heatherton, 1996; Baumeister et al., 2007; Hagger, Wood, Stiff, & Chatzisarantis, 2010). Experimental studies provide substantial evidence that people experience ego depletion, or exhaustion of self-regulation resources, which is indicated by poor performance on self-control-related tasks following prior exertion of self-control resources (Hagger et al., 2010; Muraven, Tice, & Baumeister, 1998). Further, multiple interventions have been associated with self-control improvement following efforts to practice and strengthen self-control over time (Candelaria, Fedewa, & Ahn, 2012; Piquero, Jennings, & Farrington, 2010; Piquero et al., 2016; Walters, 2000).

While we do not directly test the strength model, the theoretical implications for our arguments are relatively straightforward. That is, in terms of delinquency's effect on self-control, we might expect that those who engage in serious amounts do so as a result of ego depletion (Muraven et al., 2006) and this delinquent involvement perpetuates continued depletion as one is unable to practice or "strengthen" the self-control muscle. Further, this period of ego-depletion during the formative years might have lasting effects.

1.2. Low self-control as a brain-based disorder

Importantly, concepts similar to self-control (e.g., self-regulation, impulsivity, conscientiousness) are studied in relationship to behavior across a number of disciplines (de Ridder et al., 2012). DeLisi (2015) argues that a common thread in these similar concepts, is that they are often described as brain-based attributes, or disorders (i.e., in the case of deficiency). Self-control is generally thought to be a part of the executive functioning processes which find their home in the orbitofrontal region of the prefrontal cortex (Beaver, Wright, & Delisi, 2007; Berger & Posner, 2000; DeLisi, 2015). Under this general perspective, neuropsychological deficits tend to be common among persons that share behavioral indicators such as aggression, criminal behavior, and other externalizing behaviors (Beaver et al., 2007; Moffitt, 1993; Moffitt & Henry, 1989; Moffitt, Lynam, & Silva, 1994; Ratchford & Beaver, 2009). Individuals with such deficits are less able to manage instinctual and emotionally-laden impulses and thus less likely to avoid negative outcomes (DeLisi, 2015).

A related line of research in biosocial criminology focuses on the interplay between environmental and biological factors with contributions from neuropsychology and genetics. Heritability studies suggest that a significant portion of self-control is heritable with estimates ranging from 52 to 64% (Beaver, Wright, DeLisi, & Vaughn, 2008). Further, Beaver and colleagues argue that a significant portion of both stability and change in self-control over time can be attributed to genetic factors (Beaver, Connolly, Schwartz, Al-Ghamdi, & Kobeisy, 2013; Beaver et al., 2008). Notably, brain-based research indicates that the prefrontal cortex, where self-control is located, continues to develop across adolescence and into early adulthood (Blakemore & Choudhury, 2006; Gogtay et al., 2004; Sowell, Thompson, Holmes, Jernigan, & Toga, 1999), which extends further into the life course than nearly all of the criminological research on self-control (see for exception, Burt et al., 2014). It is important to note that the continued development of executive functioning, which may include self-control, into adulthood is thought to happen around the same time period that criminologists have long argued that criminal behavior tends to begin declining (Blakemore & Choudhury, 2006; Hirschi & Gottfredson, 1983; Sampson & Laub, 2003, 2005; Sowell et al., 1999). Such findings have important implications for the stability postulate of self-control in the general theory of crime.

2. On stability in self-control

The stability postulate of self-control has likely limited full exploration of a conceivable reciprocal relationship between delinquency and self-control. Relative stability, according to Gottfredson and Hirschi (1990), implies that once self-control differences, or lack thereof, between people or groups are established, those between-individual relationships do not change over the life course. In other words, it is assumed self-control is relatively stable after about the age of 10, regardless of differences in socialization, environments, and experiences across the life course (Beaver et al., 2008; Gottfredson & Hirschi, 1990; Piquero et al., 2010; Turner & Piquero, 2002). The assumption of stability provides little incentive to explore possible changes and development in self-control beyond childhood.