

Building Self-control to Prevent Crime

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Introduction

The saying that an ounce of prevention is worth a pound of cure is very applicable to the social problem of crime. Our society spends an incredible amount of money and effort to investigate crimes that have occurred, and to capture, prosecute and punish the offenders. According to a report by the Bureau of Justice Statistics, in 2010, individual states spent a total of \$48.5 billion on corrections (Kyckelhahn 2012). These figures do not include federal expenditures and only include the cost to states to warehouse and supervise offenders, not those associated with criminal investigation, prosecution, or the actual cost incurred from the commission of crimes themselves. A more inclusive examination of the total cost of crime to society, including losses related to health and life, money spent by citizens on goods and services to protect themselves from crime, and loss of property to victims, in addition to criminal justice expenditures, places the total annual cost of crime in the USA conservatively at

\$1.7 trillion (Anderson 2011). In spite of this incredible cost, these efforts have not produced a society that is in any way “cured” of crime. It would thus seem logical to reevaluate the current system and examine the possibility of instituting national policies that provide a hope for stopping crime before it occurs. Rather than paying for more police or stricter security measures, the most effective way to do this is to prevent people from ever becoming criminals by developing programs that focus on building self-control in early childhood.

Both developmental research and criminological work find that early childhood is often the most important period for shaping future behaviors. A common finding in criminological work is that those who begin offending at early ages are more likely to engage in not only more deviance through their life course course but also more serious acts (Mason and Windle 2001; Moffitt 1993; Tolan and Thomas 1995; Zhang et al. 1997). Therefore, early childhood should be the focus of programs because it is important to prevent those who are at risk from starting down the path toward a life of crime. It is thus necessary to understand which traits align with criminal behavior to ensure such programs focus their efforts on youth who may have a higher propensity for delinquent behavior.

There have of course been programs that attempt to prevent criminal and delinquent

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behavior. However, most of these are not based on theoretical understandings of what actually causes crime. For example, D.A.R.E., the national Drug Abuse Resistance Education program, is based on the assumption that providing information about the dangers of using drugs and asking juveniles to sign pledges not to do so will decrease this form of delinquency. This program is not based on a clear understanding of the risk factors for drug use and is ineffective in preventing youth from using drugs (Birkeland et al. 2005). If prevention programs are to be useful, it is necessary that they be grounded in a solid understanding of the causes of criminal behavior and attempt to create changes in the lives of individuals that are theoretically sound. This chapter examines one theory that can make an important contribution to crime prevention and reviews two previous programs which include some elements that are consistent with its principles. We also provide recommendations for future national programs that may be useful in establishing effective crime prevention by utilizing ideas from self-control theory.

General Theory of Crime

One theory that can make important contributions to crime and delinquency prevention is the general theory of crime, also known as self-control theory (Gottfredson and Hirschi 1990). The general theory of crime is based on classical criminology, which argues that individuals engage in behaviors that will either provide pleasure or assist them in avoiding pain. Crime is an activity that provides pleasure, in the provision of goods for relatively little effort through theft or other property crimes, or the feelings of excitement or thrills that result from activities such as drug use or from the risk of being caught. Crimes may also be a means of avoiding pain through eliminating a current irritant, such as hitting someone who is annoying you or killing a partner who is no longer desired. The general theory proposes that individuals vary in their propensity to commit crime depending on their level of self-control, or the "extent to which

they are vulnerable to the temptations of the moment" (Gottfredson and Hirschi 1990: 87). Those who are lacking self-control are described as being shortsighted, lacking focus and diligence, physically oriented, and seeking thrills and excitement (Gottfredson and Hirschi 1990: 89–90). Such individuals will engage in criminal behaviors because they will be unable to resist acts that provide immediate benefits, even at the risk of long-term costs (Hirschi and Gottfredson 2001: 83; Gottfredson and Hirschi 1990: 87–91).

This theory focuses on early childhood as the key time period to develop the characteristic of self-control. Once formed, self-control remains relatively stable and influences the individual's behaviors throughout the life course. Self-control is not a characteristic that requires individuals to engage in crime. Instead, self-control is a general propensity to participate in a wide range of behaviors that provide some type of pleasure or minimize pain whenever such opportunities arise: Therefore, if individuals form high levels of self-control in childhood, they will be less likely to engage in delinquency, crime, and other problematic behaviors throughout their lives. In contrast, if a person does not develop adequate levels of self-control as a child, they will be more likely to participate in many behaviors that provide immediate gratification throughout their lives, including criminal acts, despite the long-term negative effects of such behaviors.

A large number of studies have established that self-control does in fact predict a wide range of behaviors. Such studies have been reviewed in several publications (Agnew 2008; Gottfredson 2008; Pratt and Cullen 2000) and therefore will not be discussed here extensively. These reviews find that self-control significantly predicts violent and property crimes, drug and alcohol use, risky sexual behavior, gambling, unsafe driving practices, and even a variety of accidents. Self-control has also been found to predict criminal victimization (Nofziger 2009; Piquero et al. 2005; Schreck 1999). Given the range of behaviors that can be predicted by this characteristic, developing prevention programs that increase self-control would have substantial social benefits beyond just decreasing crime.

Therefore, it is necessary to understand more completely how self-control is developed and whether this process can potentially be taught within the context of a prevention program.

Development of Self-control

Gottfredson and Hirschi (1990: 97) argued that self-control will not be adequately developed if there is "ineffective child-rearing." They elaborate on this by discussing what they see as the three crucial components to adequately socialize a child. These are to (1) adequately monitor children's behaviors, (2) recognize when problem or deviant behaviors occur, and (3) punish or correct deviant behaviors (Gottfredson and Hirschi 1990: 97–100). These steps require a strong bond or commitment to the child from a parent. Generally, Gottfredson and Hirschi (1990: 97) argue that "the person who cares for the child will watch his behavior, see him doing things he should not do, and correct him." While this may sound very basic, these steps are not as simplistic as they suggest.

The requirement of having a person who has a bond and cares for the child is perhaps the most important failure in instilling self-control in the child. Nationally, 700,000 children every year in the USA are reported to child protective services for suspected maltreatment, representing a victimization rate of 9.1 out of every 1000 children in the population (US Department of Health and Human Services 2012). Of course, having an abusive or neglectful parent is not the only indicator of a poor bond. A long history of research in criminology has established that poor attachment to parents is one of the most important predictors of juvenile delinquency (Akers and Jensen 2008; Hirschi 1969; Hoeve et al. 2012; Rankin and Kern 1994; Rankin and Wells 1990). When children do not feel that their parents care about their activities, or do not see their parents as the type of people they want to be, they are more likely to engage in delinquency. When parents do not feel adequately bonded to their children, they are less likely to invest the time and energy to interact with their children in

positive ways. The lack of attachments between parents and children is therefore a serious problem in developing self-control.

Even if parents *do* have a strong bond with their children, they are burdened with a variety of demands on their time and energy. Monitoring active children carefully enough to be aware of all their deviant behaviors is no easy task. Supervision of children, in the form of knowing what they are doing both when they are at home and when they are out of the immediate direct control of parents, is consistently found to increase self-control (Gibbs et al. 1998; Hay 2001). However, parents often struggle to balance obligations such as work and caring for children and therefore may not be able to supervise their children effectively. This difficulty may be exacerbated by challenges experienced in single-parent homes, having large numbers of children to monitor, or the need to work multiple jobs, all of which decrease the amount of time parents can spend with their children. Past work finds that these structural characteristics of homes do in fact influence self-control and delinquency. Single-parent households are found to be more likely to produce deviant children (Rankin and Kern 1994; Wells and Rankin 1991) which may indicate single parents are less able to teach self-control. In direct tests of this assumption, recent studies have found that children from "intact" two-parent homes developed higher self-control than children in single-parent families (Hope et al. 2003; Phythian et al. 2008). In addition, studies on family size find that larger numbers of children result in higher delinquency (Sampson and Laub 1993). Both these structural characteristics of families may directly be related to the ability of parents to monitor their children. Indeed, even research that controls for family size and single-parent homes find that the level of supervision or monitoring still is an important predictor of self-control (Hope et al. 2003).

Even if parents are able to supervise adequately, they may fail to identify acts committed by their children as deviant. Parents are often unwilling to see the flaws in their children or may not actually define what their child does as

problematic. One consistent finding is that children are much more likely to engage in deviant behavior if they have criminal parents (Gottfredson and Hirschi 1990; Turner et al. 2005). One potential reason for this is that a parent who is criminal serves as a model for poor behavior. This connection is based on a social learning perspective where children learn behaviors by observing others around them (Akers and Jensen 2008; Elliott and Menard 1996; Haynie 2001). While social learning may be one way that parents transmit criminal tendencies to their children, another possibility is that these parents are low in self-control and fail to adequately instill self-control in their children. Recent work has supported this connection. A study that examined mother's self-control, different parenting practices, and children's self-control and offending, found that mothers who were low in self-control were more likely to have inconsistent expectations, and to ignore bad behavior in their children. These practices led to lower self-control in the children (Nofziger 2008).

In addition to differing levels of supervision and recognizing deviance in their children, parents also discipline and punish children in a wide variety of ways. In discussing parenting studies, Gottfredson and Hirschi (1990: 100) argue that among punishment practices "some are too harsh and some are too lenient." While there will never be total agreement on how parents should punish their children, a consistent finding is that it is necessary to provide affection and clear expectations and regulation of behavior. This style is typically classified as "authoritative" parenting (Baumrind 1978, 1991) which consists of parents being nurturing but also with high expectations and clear demands. This style has been argued to give children the greatest chance of not only being less delinquent, but generally having greater success in a variety of life outcomes. Having high expectations and providing children the support and encouragement to reach these is consistent with the needs for creating self-control as it would encourage children to think of long-term goals and improve attachments between parents and children. Indeed, this parenting style has been found to improve self-control in a number of studies

(Hay 2001; Rankin and Kern 1994). Thus, past work has demonstrated the family is vital for instilling self-control.

The importance of the family in the development of self-control is also due to the period of time when this trait is most likely to be developed. According to Hirschi and Gottfredson (2001), self-control is in flux in early childhood and then stabilizes between the ages of 8–10. This claim of stability has been the focus of recent research on the theory. Some studies have demonstrated that self-control may not be entirely stable within individuals. For example, Burt et al. (2006) divided respondents into four groups based on their levels of self-control at age 10–12. Two years later, a repeated measure of self-control indicated that nearly half of the respondents moved from one level of self-control to another. While most of this change was for those in the middle two levels of self-control and was only relatively modest shifts, 6.4 % of those with the highest self-control in wave 1 dropped to the lowest quartile in wave 2 and 7.6 % moved from the lowest to highest categories of self-control (Burt et al. 2006: 374). In spite of this example, there does seem to be a pattern in findings of moderate stability in self-control. For example, Turner and Piquero (2002: 467) found that self-control fluctuated in the earlier childhood years but became "relatively fixed" after this period. Repeated measures of self-control were moderately correlated (0.33–0.68) within offending and non-offending groups from ages 5–9 in wave 1 up to age 18–21 in wave 6. In a different national sample of children from 7 to 15 years old, Hay and Forrest (2006) found a high level of stability in approximately 80 % of the sample, which was clear as early as age 7. However, similar to the study by Burt et al. (2006), in this study about 16 % of the sample did have significant changes in self-control after the age of 10. Raffaelli et al. (2005) examined measures of self-control in children over three time periods, starting at age 4–5 and reaching the age of 12–13 at the final period. Their findings indicated that self-control measures at the three periods were significantly correlated and that relatively strong stability existed in this characteristic. Therefore, the somewhat limited work in this area indicates this

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propensity of self-control remains relatively consistent by the age of 8–10, as argued by Hirschi and Gottfredson (2001), and therefore, the family is a logical place to focus efforts at developing this trait.

The basic argument of how self-control develops, as explained by Gottfredson and Hirschi (1990), has been tested in a number of studies. The dominant findings of this work are that parenting practices that include adequate supervision and fair discipline significantly increase self-control (Gibbs et al. 1998; Hay 2001; Hope et al. 2003; Nofziger 2008; Pratt et al. 2004; Polakowski 1994). In spite of these attempts to establish the importance of the role of parenting on the development of self-control, a recent review of such work argues that there is a need to consider how self-control is also learned through other socializing influences (Cullen et al. 2008). In particular, the role of the school needs to be considered.

While Gottfredson and Hirschi (1990: 105) focused on the family as the primary source of self-control, they also admitted that the school has “several advantages as a socializing institution” even over the family. This includes the ability for teachers to monitor children in a controlled setting that has very clear expectations for behavior, and the fact that teachers have a direct interest in disciplining children who fail to live up to these expectations. Therefore, several studies have examined the role of the school in developing self-control.

Schools and Self-control

The influence of schools and teachers has been established as important potential sources of self-control in several studies. Beaver et al. (2008) examined kindergarten and first graders and discovered that some structural school characteristics significantly predicted individual levels of self-control. Specifically, a high percent of children eligible to receive free lunch and problems with classroom misbehavior decreased self-control. At a more individual level Burt et al. (2006) found that self-control improved among students who were attached to teachers. Meldrum (2008) also found that monitoring within the

school significantly improved self-control even after controlling for family experiences. Finally, an examination of parental, school, and neighborhood impacts on self-control found that the ability of the teacher and school to teach right from wrong and maintain discipline, as perceived by the children’s mothers, increased self-control (Turner et al. 2005). However, these effects were only significant in neighborhoods that were relatively advantaged. Therefore, youth who may be at greatest risk in their neighborhoods are less likely to benefit from socialization at school. In contrast, school impacts were significant for youth from higher-risk families. Specifically, “school socialization efforts to increase self-control only mattered when the family failed in their socialization task” (Turner et al. 2005: 336). Thus, it is important to examine the combination of neighborhood characteristics, family socialization ability, and school efforts, to determine where the best source for teaching self-control may lie. A program that targets both families and schools may be most effective in creating high self-control by benefiting youth who may not be getting adequate socialization in one of the settings.

Due to past findings of the key role of parents and schools, and the importance of developing self-control early for long-term impacts on behavior, the family and school are logical places to implement prevention programs that focus on increasing self-control. However, there is no need to start from scratch. Several past and existing programs that have been extremely effective in preventing juvenile delinquency and adult crime have in various ways included the concept of self-control. Two of these programs are reviewed below, with special attention on how they are relevant to the development of self-control.

Existing Prevention Programs

Various individual-based intervention programs have offered valuable insight into understanding how adult offending can be decreased by focusing on child development. Case studies of preschool intellectual enrichment programs, such as the Perry Preschool Program, and training that

focuses on child social skills and parental training, such as the Montreal Longitudinal-Experimental Study, are two salient methods of promoting pro-social skills in children and therefore diminishing delinquency and adult offending (Farrington and Welsh 2007). While the programs' original intents were not to necessarily diminish crime, their overarching results offer a framework that can illustrate the concrete application of self-control theory.

Perry Preschool Program (PPP)

Conducted by Lawrence Schweinhart and David Weikart, the Perry Preschool Project (PPP) of Ypsilanti, Michigan, is an especially noteworthy enrichment program. Using a sample of 123 disadvantaged African American children, this 2-year program served as an intervention for children born between 1958 and 1962 (Barnett 1985; Weikart and Schweinhart 1992). High-risk families were selected based on the parents' education, IQ level, and socioeconomic status. The sample of 3- to 4-year-old children was randomly selected to participate in the program or serve as a control group, with a total of 58 children being enrolled in the program (Barnett 1985). To determine the effects of the PPP, both the program and control groups were evaluated regularly throughout school, and in follow-up surveys at ages 19, 27, and 40 (Weikart and Schweinhart 1992; Heckman et al. 2010).

The goal of the PPP was to promote the educational advancement of participants by teaching them to be active learners. The way to reach this goal was through the implementation of the High/Scope Curriculum, which is an approach that "promotes intellectual, social, and physical development by providing an open framework in which children initiate their own learning activities with teacher support" (Weikart and Schweinhart 1992: 70). A key component of this approach is the plan-do-review cycle, in which "children plan, carry out, and review their own activities" (Weikart and Schweinhart 1992: 70). The teachers' role in this is to observe, interact, and implement key developmental lessons during the

children's free play. To accomplish this, teachers trained in early childhood and special education used a curriculum that surpassed the conventional preschool lessons to include a more cognitively focused approach (Barnett 1985), which drew heavily from Jean Piaget's work and psychoanalytic work (Weikart and Schweinhart 1992). Whereas traditional teaching styles use a model in which teachers implement the lessons and determine the criteria for assessing the student performance, cognitive-focused approaches shift the attention to the needs and interest of children and teachers follow these interests (Weikart and Schweinhart 1992). Such an approach requires a great deal of individualized attention to each student. Within the PPP, this was possible because the teacher worked with only five or six children at a time (Barnett 1985; Weikart and Schweinhart 1992). The personalized attention allowed the teachers to move beyond a set curriculum and instead created a situation where children were encouraged to take an active role in their learning experience while working with their teacher's support (Weikart and Schweinhart 1992). Thus, children were at liberty to engage in educational play activities that most interested them, and teachers followed this lead to then implement clear learning points.

In addition to working with the children at preschool, the PPP involved the families of the children. Teachers visited the parents in their home once a week for approximately an hour and a half. During these home visits, parents and children engaged in a discussion surrounding the children's activities in school (Schweinhart et al. 1993) and parents were instructed on how to engage in activities that aligned with the school program (Weikart and Schweinhart 1992). In addition to the home visits, parents, children, and teachers had monthly meetings, during which parents were assisted and given direction on "the necessary supports for their child to develop intellectually, socially and physically" (Schweinhart et al. 1993: 110).

While the target of this program was to promote educational readiness, it has generated a much broader range of positive social benefits. For instance, studies that have focused on the cost-benefit analysis of the PPP found that of the

long-term benefits (i.e., likelihood to graduate high school, be employed, receive a college education, and not be arrested) \$7 was saved for every \$1 spent on the program (Farrington and Welsh 2007). One of the most fruitful results of the program was the reduction in juvenile delinquency and adult crime (Barnett 1985).

Two follow-up assessments compared the criminal involvement of the program and control children in 1993 when they were 27 years old (see Schweinhart et al. 1993) and again when they were 40 years old (see HighScope Educational Research Foundation 2014). In both years, the program children had significantly fewer arrests when compared to the control group (Barnett 1985; Schweinhart et al. 1993; HighScope Educational Research Foundation 2014). The assessment at age 27 found that when compared to the control group, participants of the PPP had fewer arrests and involvement in crimes, including involvement with drugs (Schweinhart et al. 1993). Specifically, 49 % of the male non-participants were arrested, whereas only 12 % of participants of the program were arrested (Schweinhart et al. 1993). In the later follow-up study, when the participants were 40 years old, 35 % of the nonparticipants had been arrested five or more times, but only 7 % of the participants were arrested this frequently (HighScope Educational Research Foundation 2014). This follow-up showed the program had a dramatic impact on both official involvement in crime and behaviors that were reported by the participants. For example, while 48 % of the program group reported that they had ever tried marijuana, 71 % of the control group reported such activity (HighScope Educational Research Foundation 2014). In addition, 48 % of the control group but only 33 % of the program group had been arrested for a violent crime by the time they were 40 (HighScope Educational Research Foundation 2014). Such differences have dramatic impacts on the harms done to society. Even though only a small number of individuals were involved in the program, the total benefit to society in costs of crime alone was \$171,473 in 2000, by the time the participants were 40 years old (HighScope Educational

Research Foundation 2014). Even though this was a small number of participants, the Perry Preschool Program saved taxpayers over \$4000 per child in costs to victims and the criminal justice system (Weikart and Schweinhart 1992).

The Perry Preschool Program did not focus primarily on diminishing future offending by instilling self-control, but instead its goal was to serve as an intervention for at-risk children to improve their life chances later in life by promoting greater school success and therefore influence later career placement. However, the program certainly lends itself to the main tenants of the self-control theory. For instance, the school-based program encourages parents to take an active role in supervising and parenting their children. The home visits assisted parents in giving constructive feedback and direction on how to use appropriate discipline techniques. Also, by supporting children to take initiative in their own learning, these children gained a strong sense of self, and learned to focus on gratification through achieving set goals. By having control over their own education, children learned how to seek positive reinforcements on their own, therefore diminishing the likelihood of seeking alternative gratifications through negative (or criminal) means. Additionally, by focusing on the child prior to their initial criminal act and bridging the gap between school and family, the program provided two sources of attachments, supervision, and discipline to encourage self-control development. Incorporating training methods for parents and children is another noteworthy element for intervention programs and has been adapted by other studies, such as the Montreal Longitudinal-Experimental Study.

The Montreal Longitudinal and Experimental Study (MILES)

Beginning in 1984, the Montreal Longitudinal and Experimental Study (MILES) aimed to examine how parent–children interactions influenced the development and antisocial behavior of low-income children in Canada (Tremblay et al. 1993). The sample consisted of boys from 53

different schools located in low-income areas who were identified by their teachers as being at-risk due to disruptive and aggressive behavior (Begin 1995). By splitting these boys into three different groups, only one of which participated in the experimental program, researchers were able to track the effectiveness of the experiment compared to similarly at-risk children (Begin 1995; Tremblay et al. 1993; Tremblay 2003).

MILES was framed around promoting an active parenting role to foster pro-social skills of children. The structure of the program demands that parents not only interact with their children, but also oversee their children's behavior and implement positive or negative reinforcement when needed. The parent training procedure of MILES was influenced by the Oregon Social Learning Center and addresses six main points, which include;

- (1) giving parents a reading program; (2) training parents to monitor their children's behavior; (3) training parents to give positive reinforcement for pro-social behavior; (4) training parents to punish effectively without being abusive; (5) training parents to manage family crises; and (6) helping parents to generalize what they have learned (Tremblay et al. 1993: 123).

While parents were fulfilling their own training, the disruptive boys in the study received social skills training. These included role-playing, coaching, peer modeling, and reinforcement contingencies as a way to foster positive interactions with parents, peers, and teachers, as well as self-regulation of their behaviors (Begin 1995; Bertrand and Labelle 1988; Tremblay et al. 1993). During the first year, the training focused on pro-social skills and included themes such as "How to help," "How to ask 'why'," and "How to make contact" (Tremblay et al. 1993: 124). During the second year, the training addressed specifically self-control and incorporated themes such as "Look and listen," "How to react to teasing," and "What to do when I am angry" (Tremblay et al. 1993: 124). Such training taught the children how to show sympathy, stop fights and quarrels with peers,

assist peers by cleaning up messes, forming friendships, and comforting upset peers (Tremblay 2003). These activities strengthened the children's self-control, by training them how to interact with their peers verbally and consider the feelings of other people rather than solving problems physically or without thought of the consequences to others.

Assessment of MILES included behavior ratings from the subjects, peers, teachers, and mothers (Tremblay et al. 1993). While there were a number of positive outcomes, including performing better in school than the control than the non-experimental groups (Begin 1995), the main outcomes were related to aggressive and delinquent behaviors. Based on teachers' assessment, the boys' fighting behavior at ages 9 (when the treatment ended) and 12 (3 years after the treatment) was lower when compared to the other groups (Tremblay et al. 1993). Fewer boys who participated in MILES reported delinquent acts including "trespassing, stealing objects worth less and more than \$10, and stealing bicycles" (Tremblay et al. 1993: 131). Based on the 3-year follow-up assessment, boys who participated in MILES had decreased episodes of physical aggression, were more apt to adjust to any problems in school, and committed fewer delinquent acts than the non-experimental groups (Tremblay et al. 1993). Findings from a 15-year follow-up assessment found boys in the experimental group had a higher rate of high school graduation and a slightly lower rate of criminal behavior. In this study, Bosijoli et al. (2007: 417) found that "the likelihood of having a criminal record was almost twice as high for the control group as for the intervention group." Thus, MILES was a positive intervention during a crucial developmental time for at-risk boys.

The two main components of MILES, improving parenting skills and social skills training for children, are key factors that self-control theorists argue are essential in promoting self-control and thus pro-social behavior. To review, self-control theorists argue that parents must monitor their children's behavior, acknowledge deviant behaviors when they take place, and discipline their children to instill

self-control (Gottfredson and Hirschi 1990). Direct parental monitoring and direction on how to reward and punish their children are addressed in the six points of the MILES parental training approach (see Tremblay et al. 1993; Tremblay 2003). During this training, parents are instructed on how to interact with their children to decrease unwanted behavior (i.e., aggression) and increase desirable behavior (i.e., problem-solving skills). Parents who use these lessons are demonstrating high self-control themselves, as they are interacting with their children in constructive ways. So this program not only worked to improve the self-control of the children but also focused on parents and fostering their own self-control.

Additionally, by training children on social skills, children within the experimental group learned how to react to undesirable situations in constructive and healthy ways (e.g., see Bertrand Beland and Bouillon 1988; Tremblay et al. 1993). As mentioned above, children participated in role-playing to properly learn how to cope with situations that might trigger aggressive behavior. By receiving direct training on how to respond to issues pertaining to "How to react to teasing" and "What to do when they do not want me to play with them," children were coached on how to use self-control to resolve such situations positively (see Tremblay et al. 1993: 124; see also Bertrand et al. 1988). These lessons fostered behavior that was *not* consistent with thrill seeking or immediately removing irritants, which are typical of those with low self-control. Additionally, by being coached on "Look and listen" and "Following the rules," children who were in the intervention learned how to stay focused, be diligent in their work, and consider the long-term results of their behavior. These traits are consistent with high levels of self-control. Given these vital lessons, MILES provides self-control theorists with a concrete example of how the theory can be implemented to result in crime prevention.

Based on the assessments of the Perry Preschool Program and the Montreal Longitudinal-Experimental study, it is clear that such programs can positively combat future offending and criminality. While each program focused on different age groups and implemented different

interventions for at-risk youth, both programs lend themselves to self-control theory and offer concrete suggestions on how to prevent delinquency and later adult offending. For instance, the PPP and MILES offer clear methods and directions to encourage productive parental supervision, as they directly increase the parents' interaction with their children, as well as improving the communication, supervision, and rewards parents offer their children. Parents' own self-control can directly impact their children's self-control (see Nofziger 2008), and therefore, programs that aim to improve parental self-control, as well as teaching them skills related to supervision and disciplinary methods are likely to directly influence the child's self-control and deviant behavior.

Recommendations

To have the biggest impact, it is important to consider the past lessons of programs in designing a national strategy for crime prevention. While not the only interventions, both the Perry Preschool and MILES programs were highly successful and both incorporated theoretically and empirically sound elements. Even though their primary goals were not to reduce crime, or to specifically increase self-control, their success indicates that programs which do result in developing stronger self-control are effective ways of decreasing lifetime crime. There are several key lessons from these two programs. First, it is clear that programs should start at very young ages in order to have the most enduring impact. Second, programs do need to be long enough, around 2 years, to make a lasting impact, but there is no need for continual intervention as the child ages. Third, effective programs need to involve both families and schools. Fourth, programs that provide the necessary elements for the development of self-control are likely to have a lasting positive impact. Finally, it is crucial to invest in high-quality programs rather than hoping that minor changes or steps will be effective.

Based on these lessons, we recommend that developing preschool-based national programs is

the best way to prevent children from starting a life of crime. Such programs should include four key components. First, the programs must provide a means of building attachments between the teacher and student. Second, teachers must be able to provide consistent monitoring and discipline within the school setting. Third, parents and other regular caregivers of children must be included in the program to follow up on the lessons being learned in the classroom. Finally, there needs to be ongoing evaluation research to assess the impact of such programs and recommend modifications when needed. Each of these recommendations is discussed in more detail below.

The need for children to have an attachment to the adults in their lives must be the starting point of any successful program. This is the fundamental requirement if we hope to create not only high self-control but also a generally well-adjusted child. If the child does not trust the adults in their lives, or care about their opinions, there is very little incentive for them to pay attention to what is being said or to follow through on the tasks that have been set for them. By working with young children, between the ages of 3 and 5, there is the opportunity of building such bonds between not only the parent and child, but also other adult influences such as the teacher or other caregivers. To have a pre-school setting that will be successful for long-term crime preventative, it is crucial to have small class sizes to encourage the development of strong connections between teachers and pupils. Small classes enable teachers to get to know each student personally and to go beyond teaching a set curriculum and instead become an active participant in the child's life and foster independent growth. Building such a relationship would improve the likelihood of a strong attachment being formed between the teacher and child and thus fulfill the first prerequisite for building self-control in the child.

Teachers not only are a crucial type of bond for the child, but also play a very important role in observing children's behavior and rewarding or punishing children's behavior. While the Perry Preschool Program focused primarily on

encouraging active learning to promote educational advancement and MILES focused primarily on social skills training, both programs helped to instill self-control in children by facilitating close supervision through providing individualized attention in small classrooms. This not only serves to build a relationship between the child and teacher, but enables the teacher to closely observe and quickly correct any deviant behavior. Program developers would benefit from understanding that educators can have a great effect on shaping children's behavior. Granting teachers with the responsibility to determine when and how rewards and punishments should be implemented, and having consistency in these efforts, will serve to improve the self-control of the children. Of course, real consistency requires that the parents and guardians are also striving to implement similar patterns of monitoring and discipline.

While the schools and teacher are essential for an effective prevention program, it is just as important to involve the parents and other primary caretakers. As demonstrated in past research, schools may be most effective in taking over the socialization of children primarily when the family has already failed (Turner et al. 2005). However, this does not mean that the family will not continue to have an important role in the development of the child. Therefore, if the parents can become involved in the prevention program, and learn how to better train their children to have self-control as well as potentially strengthen this characteristic within themselves, this would benefit not only the one child but the remaining family members. It is not just the parents who must be involved in such efforts. According to the US Department of Education (2012), only 20 % of 4-year-old children have no regular caregivers other than their parents. The majority 57 % are regularly placed within some type of center-based program, with an additional 13 % being watched by relatives and approximately 8 % being cared for by non-relatives. Since there are clearly more people involved in the day-to-day care and socialization of the children than just the parents, any prevention program should not only start in preschools and

include parental training, but also target the regular caregivers of the children. This is to ensure consistency in how the adults interact with the child in providing supervision and discipline. For instance, MILES worked directly with parents to train them on how to implement effective punishments and rewards for pro-social behavior of their children (see Tremblay et al. 1993). Additionally, PPP included home visits in which teachers would inform the parents of their children's educational progress and encouraged continuing the focus on reaching those educational goals at home. Each program incorporated parents within the structure of the program, and as a result, the attachment between child and parent was strengthened, as was the child learning self-control. Therefore, future programs should provide caregivers with training on effective discipline as well.

These first three recommendations are based not only on the successful models of PPP and MILES, but also on empirical research within criminology and child development. The close relationships and attachments between the child and teachers, combined with a preschool structure that creates high, but age appropriate, expectations for the child, are consistent with the authoritarian parenting outlined by Baumrind (1978). While teachers are no substitute for good parenting, they do act as caregivers for a substantial portion of the child's day. Thus, establishing this "parenting" style within the school will serve to socialize the child and instill self-control. Extending this style of parenting into the home, through parental and caregiver training and skill building, provides a consistency that improves the chances of high levels of self-control even more.

The PPP and MILES have both been cited exhaustively as key longitudinal prevention programs with appropriate evaluation (Farrington and Welsh 2007; Heckman et al. 2010; Lacourse et al. 2002). By carrying out follow-up studies of children who received training and interventions for each program, a better understanding of the long-term effects of each program was made possible. This is an important component of any prevention program to indicate what potential

modifications future programs should consider. For instance, by completing follow-up studies of preschool children and non-preschool children, developers of the PPP learned immediate benefits (i.e., viewed school as more important and enjoyed talking about school with their parents) as well as later effects (i.e., employment and supporting themselves) (Weikart and Schweinhart 1992). Much of these effects were unintended, although still served to improve the preschool children's life changes and greater society. For instance, some benefits, such as having great self-confidence, are not directly linked to self-control, but they are likely to have an indirect influence, such as improving one's ability to communicate effectively.

Therefore, our final recommendation for future programs is to ensure that in-depth follow-up studies are completed to document the benefits and possible challenges needed for implementing the program. Specifically, follow-up studies should include insights from children, parents and caregivers, and educators who participated in the program. Previous studies such as MILES (see Tremblay et al. 1993) relied on self-reports of children's perceptions of behavioral changes in their parents, instead of seeking these answers directly from the parents. By directly evaluating the long-term effects of *all* participants involved in the program, a more thorough understanding of who and how is being affected by the training/intervention can be satisfied. Similarly, self-control theory states that children who have high levels of self-control are less likely to participate in later delinquency and adult criminality. Therefore, it is essential that such programs utilize longitudinal methods to determine whether indeed children who receive the intervention form high self-control and therefore lead less delinquent lives.

Conclusion

The current national focus on being "tough on crime" does not work. We continue to spend more money and incarcerate at higher rates than most other countries, but still have very high

crime rates. Thus, it is more than time to redirect our efforts in implementing national prevention policies. The way to prevent crime is to work with very young children so that schools and families can provide the necessary supervision and discipline needed to instill adequate self-control. Such an approach not only would have substantial effects on crime, as demonstrated by previous programs, but would also serve to improve many aspects of the children's lives, as well as provide benefits to society.

One barrier to implementing any prevention strategy is finding the necessary resources. Schools regularly struggle to operate within their budgets and classrooms continue to grow with pressures to carry on the task of educating our children with fewer resources. Those schools that likely would benefit the most from including a high-quality preschool crime prevention program are those that may struggle the most to find the funding and community support to do so. However, it is important to realize that such programs are not so cost-prohibitive as we may expect.

Nationally in the 2009–2010 academic year, the cost of public elementary and secondary schools in the USA was \$638 billion, or the equivalent of \$12,743 per student (US Department of Education 2013). This is only \$3000 less than the cost of the Perry Preschool Program. Considering the long-term cost to benefit analyses of that program, it is clear that a little additional investment in early education can have substantial economic benefits to the individual and larger society over the long run. In addition, we continue to fund programs that are not empirically supportable as being effective in decreasing juvenile crime. For example, the cost of the D.A.R.E. program is estimated to be between \$1 and \$2 billion annually (Riskind 2002). Considering the lack of results of this policy, one way to fund a high-quality preschool program that may have a much larger impact would be to defund those that have not produced any consistent benefits.

It is indisputable that decreasing delinquency and adult criminality serves to benefit society at large. Furthermore, based on self-control theory, it

comes as no surprise that working directly with children, at young ages, can impact their propensity to embody a life free of crime, or a life laden with deviant acts. It is therefore in society's best interest to invest in children when they are young and when the benefits of developing self-control are greatest. Given the assessments and findings from PPP and MILES, it is apparent that incorporating self-control training and skills within the school and family is an especially positive way to influence high levels of self-control and therefore lower rates of later criminality. Grounding future prevention and intervention programs in theory will further strengthen policy developers' attempts to better society. Self-control theory offers a clear understanding on how to prevent crime, and by applying these ideas to future programs, society may have a greater chance at finally decreasing crime.

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