



# JUSTICE RESEARCH

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## CHANGING LIVES: PREVENTION AND INTERVENTION TO REDUCE SERIOUS OFFENDING

Decades of study have revealed much about risk factors for delinquency and crime. Individual characteristics and various factors can increase the probability of offending and may also predict substance abuse, teenage pregnancy, dropping out of school and other problems during adolescence and early adulthood. Because risk factors can predict future criminal behavior, prevention and intervention programs focus on mitigating them in a young person's life. In addition, longitudinal studies have identified protective factors that inhibit criminal behavior. Programs that strengthen these protective factors can reduce the risk of delinquency. Most prevention and intervention programs that address risk factors have not been adequately evaluated, but high-quality studies are emerging. Randomized controlled trials and other rigorous studies have shown that many of these programs have positive effects on offending in addition to other outcomes.

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*This publication summarizes Bulletin 6: Changing Lives: Prevention and Intervention to Reduce Serious Offending by Brandon C. Welsh, Mark W. Lipsey, Frederick P. Rivara, J. David Hawkins, Steve Aos, Meghan E. Peel and David Petechuk, NCJ 242936, available at [NCJRS.gov](http://NCJRS.gov). Bulletin 6 is one in a series of bulletins prepared for Transitions From Juvenile to Adult: Papers From the Study Group on Transitions From Juvenile Delinquency to Adult Crime. The study group was led by David Farrington and Rolf Loeber under award number 2008-IJ-CX-K402; to learn more, visit [NIJ.gov](http://NIJ.gov), keyword "Transitions to Adulthood." This summary was written by Phil Bulman, a staff writer at NIJ. See full bulletin for source citations.*

This bulletin focuses on the highest quality evaluation studies and research reviews. Grouped by program focus — family, school, peers and community, individual, employment — the bulletin assesses early childhood, juvenile, and early adulthood programs that have demonstrated measurable impacts on offending in early adulthood or up to age 29.

### Family-Based Programs

Family-based programs target risk factors such as poor child rearing. Psychologists deliver some programs; public health professionals deliver others. This section discusses programs for young children and for adjudicated delinquents.

### Young Children

Only a few programs that focus on early childhood have demonstrated that they have an impact on reducing offending in early adulthood. One was a parent training program that yielded positive results for young children but showed no impact for participants when they were between ages 16 and 21.

The best-known home visiting program, and the only one with a direct measure of delinquency, is the Nurse-Family Partnership initially carried out in Elmira, N.Y. Four hundred first-time mothers were randomly assigned to receive home visits from nurses during pregnancy or during the child's first two years or to a control group that received no visits. Nurses visited mothers in the experimental groups every two weeks, advising them on prenatal and postnatal care, infant development, the importance of nutrition, and avoiding smoking and drinking during pregnancy.

Results showed that postnatal visits — particularly to poor, unmarried teenage mothers — were associated with a significant decrease in reported abuse and neglect during the child's first two years. In a 15-year follow-up, significantly fewer experimental group mothers were identified as committing child abuse and neglect. By age 15, children of the higher risk mothers in the experimental group had significantly fewer arrests than controls. By age 19, girls in the experimental group had significantly fewer arrests, and girls of the higher risk mothers had significantly fewer children of their own and less Medicaid use. However, few effects were observed for boys.



### THE NURSE-FAMILY PARTNERSHIP: FROM TRIALS TO INTERNATIONAL REPLICATION

See the founder of the Nurse-Family Partnership, David Olds, Ph.D., discuss the program during a Research for the Real World seminar at [NIJ.gov](http://NIJ.gov), keyword “nurse-family olds interview.”

## Adjudicated Delinquents

### Multisystemic Therapy

This therapy, designed for serious juvenile offenders, may include individual, family, peer, school and community interventions, including parent training and other skill-building sessions. It is often referred to as family-based treatment. Three evaluations of randomized experiments have measured the impact of multisystemic therapy on offending in

early adulthood (the experimental groups received multisystemic therapy).

- **Substance-abusing offenders:** 118 substance-abusing juvenile offenders received either multisystemic therapy or the usual community services. The mean age at treatment was 15.7 and at follow-up was 19.6. The experimental group had significantly lower yearly conviction rates than did the controls for violent crimes but not for property crimes. Effects on long-term drug use were mixed, with higher rates of marijuana abstinence for the experimental group but no effect on cocaine use.
- **Violent offenders:** 176 serious and violent juvenile offenders received either multisystemic therapy or individual therapy. The mean age at treatment was 13.7 and at follow-up was 28.8. The experimental group had significantly lower recidivism rates than did the controls (50 percent versus 81 percent), including lower rates of rearrest for violent offenses (14 percent versus 30 percent). Experimental participants also had 54 percent fewer arrests and 57 percent fewer days of confinement in adult detention facilities.
- **Sex offenders:** 48 high-risk juvenile sex offenders received either multisystemic therapy or the usual community services. The mean age at treatment was 14 and at follow-up was 22.9. The experimental group reported lower recidivism rates than did the controls for sexual (8 percent versus 46 percent) and nonsexual (29 percent versus 58 percent) crimes. Experimental participants also had 70 percent fewer arrests for all crimes and spent 80 percent fewer days in detention facilities.

### Functional Family Therapy

This approach modifies patterns of family interaction through modeling and reinforcement to encourage clear communication and minimize conflict. A long-term follow-up of a randomized experiment involving 54 juvenile offenders compared family therapy with probation services. The mean age at treatment was 15.4 for the experimental group and 15.3 for the control group. Most were between ages 20 and 22 at follow-up. Family therapy participants reported a lower rate of rearrest compared with their control counterparts.

## Multidimensional Treatment Foster Care

This approach includes both individual therapeutic care for adolescents in foster care and training in parent management skills. A short-term follow-up of a randomized experiment involving 81 serious and chronic female juvenile offenders compared multidimensional treatment with group care. The age at treatment was between 13 and 17 and at follow-up was between 15 and 19. Multidimensional care was more effective than group care as measured by days in locked settings, number of criminal referrals and self-reported delinquency.

A two-year follow-up of a randomized experiment involving 79 adolescent males compared multidimensional treatment to group home care. The age at treatment was between 12 and 17 and at follow-up was between 16 and 19. Multidimensional treatment was significantly more effective than group home care as measured by referrals for violent offending and self-reports of violent behavior. Only 5 percent of participants in the multidimensional program had two or more criminal referrals for violent offenses compared with 24 percent of the group home adolescents.

## School-Based Prevention Programs

Only three school-based prevention programs have demonstrated that they have an impact on reducing offending in early adulthood: the Seattle Social Development Project, the Montreal Longitudinal-Experimental Study and the Good Behavior Game.

### Seattle Social Development Project

This project combines parent training, teacher training and skills training for children. About 500 first-graders were randomly assigned to experimental or control classes in the original study. Parents and teachers in the experimental classes received child management instruction designed to increase children's attachment to parents and their bonding to school. They also learned how to teach children positive ways to solve problems.

A follow-up at age 18 found that the group that participated in the full program through grade six

reported significantly less violence, less alcohol abuse and fewer sexual partners than the group that participated in grades five and six only or the control group. In the latest follow-up, the group that participated in grades one through six reported significantly better educational and economic attainment and mental and sexual health by age 27, but no effects were found for substance abuse or criminal activity at ages 24 or 27.

### Montreal Longitudinal-Experimental Study

This study combined skills training, parent training and teacher support. About 250 disruptive 6-year-olds from low socioeconomic neighborhoods were assigned randomly to two groups, experimental and control. The experimental group learned how to improve social skills and self-control. Coaching, peer modeling, role playing and reinforcement strategies were used in small group sessions at school. Parents were trained in parent management, family crisis management and techniques for nonpunitive and consistent discipline.

By age 12, three years after the end of treatment, the boys in the experimental group committed significantly less burglary and theft and were significantly less likely to get drunk or get into fights than the boys in the control group. The experimental boys also had significantly higher school achievement. At every age from 10 to 15, the experimental boys had significantly lower self-reported delinquency scores than the control boys. The differences in delinquency between the two groups increased as the follow-up progressed. However, the experimental boys were only slightly less likely to have a juvenile court record up to age 15 (7 percent compared with 9 percent). The experimental boys were also less likely to be gang members or to get drunk or take drugs but were not significantly less likely than the controls to have intercourse by age 15.

The latest follow-up was a criminal record check at age 24. Those in the experimental group were less likely to have a record than their control counterparts (22 percent compared with 33 percent).

## Good Behavior Game

The Good Behavior Game encourages children to learn how to regulate their own and their classmates' behavior. In an experimental study in 19 urban elementary schools in Baltimore, first-grade students were randomly assigned to groups that had equal numbers of disruptive children. The two-year program began with tangible rewards, such as stickers, for entire groups that exhibited good behavior. Eventually, they moved to less tangible rewards such as longer recess times.

After one year, teachers and peers rated the experimental students as less aggressive and shy than control students. The most positive effects were for students rated most aggressive at baseline. Among boys with the highest baseline aggression ratings, the positive effects endured through sixth grade.

Between ages 19 and 21, male participants in the highest risk group engaged in significantly less violent and criminal behavior than their control counterparts (34 percent compared with 50 percent). They also had significantly lower rates of drug dependence.

## Peer- and Community-Focused Programs

Peer-focused programs to prevent offending concentrate on reducing the influence of delinquent friends and increasing the influence of healthier friends. There are no outstanding examples of effective intervention programs for delinquency and later offending based on peer risk factors.

## Children at Risk

The most important prevention program whose success seems to be based mainly on reducing peer risk factors is the Children at Risk program, which targeted high-risk adolescents with an average age of 12 who lived in poor neighborhoods of five American cities. Participants were identified in schools and randomly assigned to experimental or control groups. Initial reports were disappointing, but a one-year follow-up showed that, according to self-reports, experimental participants were less likely to have committed violent crimes or sold drugs.

## Mentoring Programs

Community-based prevention covers a wide array of programs such as after-school programs, mentoring, youth groups and resident groups. Although evidence is insufficient to support claims that after-school programs are effective, mentoring programs have been shown to produce a significant 10-percent reduction in offending on average. Mentoring is more effective when the average duration of each contact between mentor and mentee is greater and when mentoring is combined with other interventions. However, no studies have included follow-ups in the early adult years.

## Communities That Care

Communities That Care and other comprehensive community initiatives work to bring together key people to target a range of risk factors. Findings from a randomized controlled trial involving 4,400 students in 24 American communities found that the program significantly reduced the initiation of delinquent behavior and both alcohol and cigarette use between grades five and eight. However, there are no follow-ups into early adulthood.

## Individual-Level Programs

These programs target individual-level risk factors for offending in early childhood, adolescence and early adulthood. They may focus on intellectual stimulation for preschool children, social skills training that targets traits such as impulsivity and low empathy in childhood, or treatment of substance abuse and improving mental health in young adults. Several preschool programs have demonstrated that they have an impact on reducing offending in early adulthood.

## Perry Preschool Project

The Perry Preschool project included 123 children in Ypsilanti, Mich., who were divided into experimental and control groups. Children in the experimental group attended a daily preschool program, backed up by weekly home visits, when they were ages 3 and 4. The goal was to provide intellectual stimulation that

would increase their thinking and reasoning abilities and lead to later school achievement.

The program had long-term benefits. At age 19, subjects in the experimental group were more likely to be employed, to have graduated from high school and to have received college or vocational training and were less likely to be arrested. By age 27, the experimental group had only half as many arrests as the controls, an average of 2.3 compared with 4.6. They were more likely to have graduated from high school, had significantly higher earnings and were more likely to be homeowners. Among female participants in the experimental group, more were married, and fewer of their children were born out of wedlock.

The most recent follow-up, which included 91 percent of the original sample at age 40, found important differences between the experimental and control groups. Participants in the experimental group had significantly fewer lifetime arrests for violent crimes (32 percent compared with 48 percent), property crimes (36 percent compared with 58 percent) and drug crimes (14 percent compared with 34 percent) and were significantly less likely to have been arrested five or more times (36 percent compared with 55 percent). In addition, they had significantly higher levels of schooling (77 percent graduated from high school compared with 60 percent), better employment records and higher incomes.

## Child-Parent Center Program

The Child-Parent Center program gave disadvantaged children ages 3 and 4 an active learning preschool program and family support. Educational enrichment continued into elementary school up to age 9. The program operated in 24 centers in impoverished Chicago neighborhoods. An evaluation found that, compared with the control group, those in the program group were significantly less likely to be arrested for any offense (17 percent compared with 25 percent). They also had lower rates of multiple offenses and violent offenses at age 18 and a significantly higher rate of high school completion (50 percent compared with 39 percent). At age 24, participants in the experimental group had significantly lower rates of felony arrests (17 percent

compared with 21 percent) and lower rates of incarceration (21 percent compared with 26 percent).

## Carolina Abecedarian Project

The Carolina Abecedarian Project targeted 111 low-income children, 98 percent of whom were African American, deemed to come from multirisk families. The experimental group received full-time preschool care in addition to social services; the control group received only social services. At age 21, fewer of those in the experimental group reported misdemeanor or felony arrests or incarceration. Also, significantly fewer were marijuana users or had become teenage parents, and significantly more had attended college or university.

## Employment-Based Training Programs

These programs for adolescents and young adults focus on increasing employment rates among people at risk of serious offending.

### WORK AS A POSSIBLE NEGATIVE INFLUENCE

Many studies support the importance of employment in fostering desistance from crime and substance abuse, but some studies have found full-time employment may actually decrease the likelihood of desistance. Some researchers have wondered if employment for those who have strong criminal propensities may actually provide more opportunities to steal.

## Intensive Residential Training Programs

Job Corps is the only residential program that has demonstrated desirable effects on offending in early adulthood. It also has positive effects on subsequent earnings.

Job Corps improves the employability of at-risk young people (ages 16-24) by offering vocational training, education and health care. It serves about 60,000 people annually. A three-year follow-up of a

randomized experiment that included 15,400 people found that Job Corps produced statistically significant reductions in criminal activity, improved educational attainment and greater earnings. The arrest rate among participants was 29 percent compared with 33 percent for control counterparts. Tax data analysis showed that earnings gains continued for the oldest participants eight years after completing the program.

## Ex-Offender Job Training for Older Males

These programs may be useful for those who are old enough to be “aging out” of crime. Few evaluations of programs that serve this population exist. Two programs from the 1970s that reduced offending in early adulthood were the Supported Work program and the Baltimore Life Experiment. One analysis found that the Supported Work program was highly effective at reducing offending and improving employment for ex-offenders older than age 26, but not for younger participants.

## Transition to Adulthood

Few studies have examined the impact of interventions on criminal behavior outcomes during the transition from late adolescence to early adulthood. Most focus exclusively on juvenile or adult populations, but results are largely consistent. Four interventions with ample studies show effectiveness:

1. **Cognitive behavioral therapy** produces on average a 22-percent reduction in offending rates. Most studies focus on either juveniles or adults. There is no reason to expect that this approach would be any less effective among offenders in the transitional age group.

2. **Educational, vocational and employment programs** show mixed results. Some find a modest 10-percent decrease in offending, others find the mean effect to be about 20 percent, and still others have found no effect on reoffending rates.

3. **Substance abuse treatment** is commonly provided to offenders, and treatment programs produce a range of positive effects, from about 4- to 20-percent reductions in reoffending rates.

4. **Treatment for sex offenders** varies, and analyses of effectiveness have all looked broadly at this category of program rather than at specific interventions. Reductions in general reoffending rates (not limited to sex crimes) range from 24 to 36 percent.

## Costs and Benefits

The financial benefits of programs often outweigh their costs, as they both reduce offending in the young adult years and save money in the long run. According to research conducted by the Washington State Institute for Public Policy (WSIPP), this was true of multidimensional treatment foster care (\$8 saved per \$1 expended), functional family therapy (\$10 saved per \$1 expended), multisystemic therapy (\$3 saved per \$1 expended), vocational education in prison (\$12 saved per \$1 expended), cognitive-behavioral therapy in prison (\$22 saved per \$1 expended), drug treatment in prison (\$6 saved per \$1 expended), and employment training in the community (\$12 saved per \$1 expended).

See table 1 for WSIPP's 2009 analysis of the benefits and costs of selected well-researched programs intended to reduce criminal reoffending of juvenile and young adult offenders. For WSIPP's current cost-benefit analyses, see <http://www.wsipp.wa.gov>.

**TABLE 1:** Estimates of the benefits and costs of selected evidence-based programs for juvenile and young adult offenders

Program	Expected Effects		Benefits and Costs (2009 Dollars)					
	% Change, Reoffense	# of Studies	Total Benefits per Participant	Benefits to Taxpayers	Benefits to Victims	Total Cost per Participant	Total Benefits ÷ Costs	Total Benefits – Costs
<b>Juvenile Setting</b>								
Multidimensional Treatment Foster Care	-18%	3	\$59,275	\$13,544	\$45,731	\$7,418	\$7.99	\$51,857
Functional Family Therapy	-18	7	32,248	8,463	23,785	3,134	10.29	29,114
Family Integrated Transitions	-10	1	33,770	7,716	26,054	10,795	3.13	22,975
Adolescent Diversion Project	-28	6	21,434	5,507	15,927	2,116	10.13	19,318
Multisystemic Therapy	-13	9	23,112	6,065	17,047	7,076	3.27	16,036
Aggression Replacement Training	-9	4	15,325	4,022	11,303	1,449	10.58	13,876
Restorative Justice, low-risk offenders	-10	14	7,820	2,009	5,811	972	8.04	6,848
Coordination of Services	-2	14	3,402	893	2,509	379	8.98	3,023
<b>Adult Setting</b>								
Vocational Education in Prison	-10%	4	\$15,470	\$4,763	\$10,707	\$1,296	\$11.94	\$14,174
Intensive Supervision, with treatment	-18	11	20,617	6,262	14,355	7,878	2.62	12,739
Education in Prison, basic or post-secondary	-8	17	13,128	4,042	9,086	1,055	12.45	12,073
Cognitive Behavioral Programs in Prison	-7	27	11,204	3,450	7,754	517	21.69	10,687
Drug Treatment in Community	-9	6	9,999	3,037	6,962	629	15.89	9,370
Drug Treatment in Prison	-6	21	10,195	3,139	7,056	1,758	5.80	8,437
Drug Courts	-9	67	9,869	3,375	6,494	4,792	2.06	5,077
Job Training/Assistance in Community	-5	16	5,238	1,591	3,647	438	11.96	4,800
Intensive Supervision, surveillance only	-2	23	1,769	537	1,232	4,144	0.43	-2,375

Note: All monetary figures are life-cycle present values; the discount rate used was 3 percent. All figures estimated with WSIPP's benefit-cost model. The benefits to taxpayers and program costs are estimated for Washington state taxpayers. The benefits to crime victims are estimated with victim cost information representing the United States. All estimates were calculated in April 2010.

## Program Effectiveness

NIJ's CrimeSolutions.gov uses proven research to determine what works in criminal justice, juvenile justice and crime victim services. CrimeSolutions.gov rates some of the programs discussed in this summary as being effective or promising in reducing serious crime rates among young people (see table 2).

**TABLE 2:** Evidence ratings from CrimeSolutions.gov

Title	Evidence Rating
<b>Effective</b>	
Multisystemic therapy	
Functional family therapy	
Multidimensional treatment foster care	
Nurse-Family Partnership	
Good Behavior Game	
Perry Preschool Project	
<b>Promising</b>	
Communities That Care	
Montreal Longitudinal-Experimental Study	
Child-Parent Center	
Job Corps programs	

Note: A rating with one icon denotes programs evaluated in one study or meta-analysis. A rating with multiple icons denotes programs evaluated across multiple studies.

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