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The High/Scope Perry Preschool Project

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The Office of Juvenile Justice and Delinquency Prevention (OJJDP) recently published *Costs and Benefits of Early Childhood Intervention* (Greenwood, 1999), a Fact Sheet reviewing the benefits of early childhood intervention in the prevention of later delinquency. Among the most notable and longstanding secondary prevention programs considered was the High/Scope Perry Preschool Project of Ypsilanti, MI.¹ This Bulletin examines this successful program model, which demonstrates a potential link between early childhood intervention and delinquency prevention.

The High/Scope Perry Preschool Project is a well-established early childhood intervention that has been in operation for almost 40 years. A review of the program's findings is useful at this time in light of the field's growing knowledge of risk factors associated with juvenile delinquency, including early childhood risk factors that may be diminished by secondary prevention programs targeted at high-risk populations. Juvenile justice research has made great strides in identifying risk factors that may be precursors to delinquency. Although the probability of delinquency increases with the number of risk factors, specific risk factors

appear to vary according to a child's stage of development and may be reduced with appropriate preventive measures. These developmental differences for risk factors indicate the need for targeted interventions that address specific age-related factors (Wasserman and Miller, 1998). Given this link between early risk factors and later delinquency, it is important for practitioners to plan intervention programs for high-risk youth early in a youth's life so that he or she can develop a strong foundation for later development.

Background

The High/Scope Perry Preschool Project, which began in 1962, is the focus of an ongoing longitudinal study—conducted by the High/Scope Educational Research Foundation—of 123 high-risk African American children.² Participants were of

²The original Perry Preschool no longer exists, but the High/Scope Educational Research Foundation—founded in 1970 by Perry Preschool researcher David Weikart—continues to collect followup data from the participants of the 1962 study. The foundation is an independent organization dedicated to nonprofit research, development, training, and public advocacy. Its principal goals are to promote the learning and development of children worldwide from infancy through adolescence and to support and train educators and parents as they help children learn. In a High/Scope program, students should learn through active involvement with materials, events, and ideas. The Foundation disseminates the High/Scope Preschool model worldwide.

¹Unlike primary prevention programs, which are directed at the general population, secondary prevention programs target children at risk for school failure or delinquency.

From the Administrator

The more we learn about risk factors for delinquency, the more obvious it is that effective prevention programs targeting children at risk can provide benefits far beyond their cost. This Bulletin revisits a time-tested early childhood education program and looks at the results to date from an ongoing, well-designed study of the program.

Nearly 40 years ago, the High/Scope Perry Preschool Project developed a high-quality educational approach focusing on 3- and 4-year-olds at risk for school failure. The longitudinal study has found that not only was the project effective as an educational intervention, it also demonstrated other positive outcomes, including a significantly lower rate of crime and delinquency and a lower incidence of teenage pregnancy and welfare dependency. By the age of 27, program participants were nearly three times as likely to own their own homes than the control group and less than half as likely to be receiving public assistance.

This Bulletin explains how and why the Perry Preschool Project was successful, presents two positive cost-benefit analyses, and examines the implications for future policy decisions. One conclusion is that an effective prevention strategy requires both quality programming and an adequate commitment of resources.

John J. Wilson
Acting Administrator

low socioeconomic status, had low IQ scores (between 70 and 85, the range for borderline mental impairment) with no organic deficiencies (i.e., biologically based mental impairment), and were at high risk of failing school. Fifty-eight of these 3- and 4-year-old children were assigned to the program group, and 65 of these children were assigned to a control group that did not go through the program. The groups were matched according to age, IQ, socioeconomic status, and gender. There were no differences between the groups with regard to father absence, parent education level, family size, household density, or birth order. Researchers collected follow-up data annually when the children were between ages 4 and 11 and at ages 14, 15, and 19 and collected age 27 data from 1986 to 1991 (Schweinhart, Barnes, and Weikart, 1993; Schweinhart and Weikart, 1995).³

The High/Scope Perry Preschool Project's high-quality educational approach is based on an active learning model that emphasizes participants' intellectual and social development. Children attended the preschool Monday through Friday for 2.5 hours per day over a 2-year period. During that same period, a staff-to-child ratio of one adult for every five or six children enabled teachers to visit each child's family in their home for 1.5 hours each week. In addition, parents participated in monthly small group meetings with other parents, facilitated by program staff.

Although it was initiated as an educational intervention, the High/Scope Perry Preschool Project has demonstrated a number of other positive outcomes, including a significantly lower rate of crime and delinquency and lower incidence of teenage pregnancy and welfare dependency. Overall, the program group has demonstrated significantly higher rates of prosocial behavior, academic achievement, employment, income, and family stability as compared with the control group. The success of this and similar programs demonstrates intervention and delinquency prevention in terms of both social outcome and cost-effectiveness and has a number of useful implications for policy, practice, and ongoing



research. This Bulletin reviews the program outcomes, describes the early childhood risk factors that can be targeted with intervention, and explores the relationship between program components and risk factors.

Program Outcomes

Outcomes of the High/Scope Perry Preschool longitudinal study can be divided into three major categories: social responsibility, scholastic success, and socioeconomic success (Schweinhart et al., 1985). Social responsibility variables include delinquency, marital status, and pregnancy. Scholastic success is determined by a number of factors including graduation rate, grade point average, and postsecondary education, whereas socioeconomic success is measured in terms of employment, earnings, and welfare assistance. Cost-benefit is included as an additional outcome because of the long-term savings to society as a result of program success.

Social Responsibility

Delinquency. Data collected from police and court records show that juvenile delinquency was significantly lower for the High/Scope Perry Preschool program group as compared with the control group, including fewer arrests and fewer juvenile court petitions (Schweinhart, Barnes, and Weikart, 1993; Schweinhart and Weikart, 1995). Only 31 percent of the program group had ever been arrested, compared with 51 percent of the control group. In addition to police and court records, data collected from respondents at age 19 were used as an overall indicator of delinquency. When study participants were 19 years old, researchers found significant differ-

ences between the program and control groups. The program group had fewer arrests overall than the control group (averages of 1.3 versus 2.3 arrests per person), fewer felony arrests (averages of 0.7 versus 2.0 arrests per person), and fewer juvenile court petitions filed (averages of 0.2 versus 0.4 petitions per person).

Like the criminal record data, a misconduct scale based on teacher-report data and self-report data from the 19-year-old respondents demonstrates a significant difference between the program and control groups, as reflected by the following results for the program group:

- ◆ Lower overall scores for total misconduct and serious misconduct at ages 15 and 19.
- ◆ Lower incidence of fighting and other violent behavior.
- ◆ Lower incidence of property damage.
- ◆ Fewer police contacts.

Data collected from respondents at age 27 indicate significant differences between the program group and control group for adult arrests: the control group underwent more than twice as many arrests as the program group (averages of 4.0 versus 1.8 arrests per person). Thirty-six percent of the control group accounted for 98 felony arrests between ages 19 and 27, while 27 percent of the program group accounted for 40 felony arrests during the same period. Thirty-five percent of the control group were considered frequent offenders (defined as five or more arrests), compared with only 7 percent of the program group. In addition, 25 percent of the control group had been arrested for drug-related offenses, versus 7 percent of the

³ Researchers are currently collecting followup data from the original program participants. Called the High/Scope Perry Preschool Midlife Study, researchers have already interviewed 30 of the 39- to 41-year-old participants. The interview emphasizes health and the performance of the program participants' children. The researchers expect to complete the data collection by the end of 2001. This study is funded by the McCormick Tribune Foundation in Chicago, IL.

program group (see figure 1). The control group also averaged more months on probation (6.6 versus 3.2 months) and had more than twice as many of its members placed on probation or parole for longer than 18 months (20 percent versus 9 percent).

Marital status and pregnancy. Marital status among the males was the same for both groups, with 26 percent married at age 27, although program group males, on average, had been married for a longer period (6.2 versus 3.3 years). Marital status among the females differed significantly, with 40 percent of program group females married, compared with 8 percent of the control group females. Although fewer females in the program group were parents (64 percent versus 75 percent), significantly more of them were married, cohabiting parents (28 percent versus 8 percent). Fifty-seven percent of mothers in the program group gave birth out of wedlock, compared with 83 percent of mothers in the control group. In measures related to family stability, the program group scored significantly higher on a measure of closeness to family and friends (66 percent versus 48 percent) and the ability to maintain persistence at tasks (i.e., work or study hard all day) (47 percent versus 33 percent).

Scholastic Success

Participants in the High/Scope Perry Preschool study were characterized by better academic performance than those in the control group, as measured by higher graduation rates, better grades, higher standardized test scores, and fewer instances of placement in special education classes. In addition, the program group spent more time on homework and demonstrated more positive attitudes toward school at ages 15 and 19. More parents of program group members had positive attitudes regarding their children’s educational experiences and were hopeful that their children would obtain college degrees. The program group demonstrated significant academic differences in the following areas:

- ◆ **Special education for mental impairment.** Only 15 percent of the program group had been placed in special education programs for mental impairment, compared with 34 percent of the control group.
- ◆ **Test scores.** Each year from ages 7 to 14, the mean achievement test scores of the program group were noticeably higher than those of the control group

(an average difference of 16 percent). The difference in the final achievement test scores of the two groups at age 14 was particularly significant: the program group’s scores were 29 percent higher than those of the control group.

- ◆ **Grade point average.** The mean high school grade point average of the program group was higher than that of the control group (2.09 versus 1.68).
- ◆ **Graduation from high school.** Seventy-one percent of the program group graduated from high school, compared with 54 percent of the control group. The difference was largely accounted for by graduation rates among females (84 percent and 35 percent, respectively).

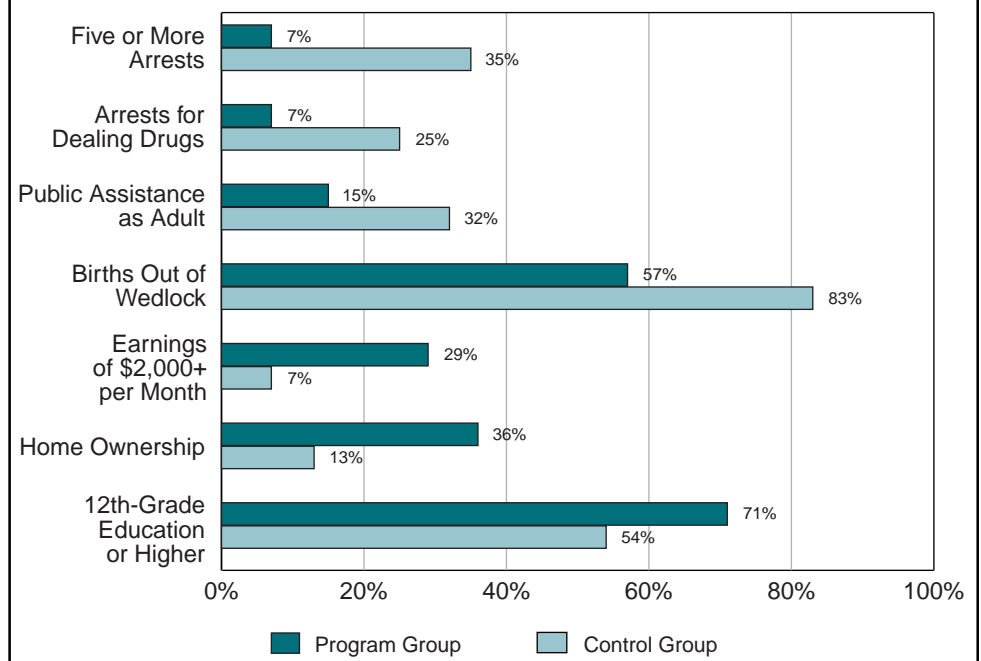
Socioeconomic Success

Data collected at ages 19 and 27 indicate that the program group has been more successful socioeconomically than the control group. The data for age 19 reveal that significantly more program group members were employed (50 percent versus 32 percent) and self-supporting (45 percent versus 25 percent). These data

also reflect that fewer program group members received welfare assistance (18 percent versus 32 percent). The data for age 27 reveal a continuation of significant economic differences characterized by more economic stability among the program group members, as measured by the following indicators:

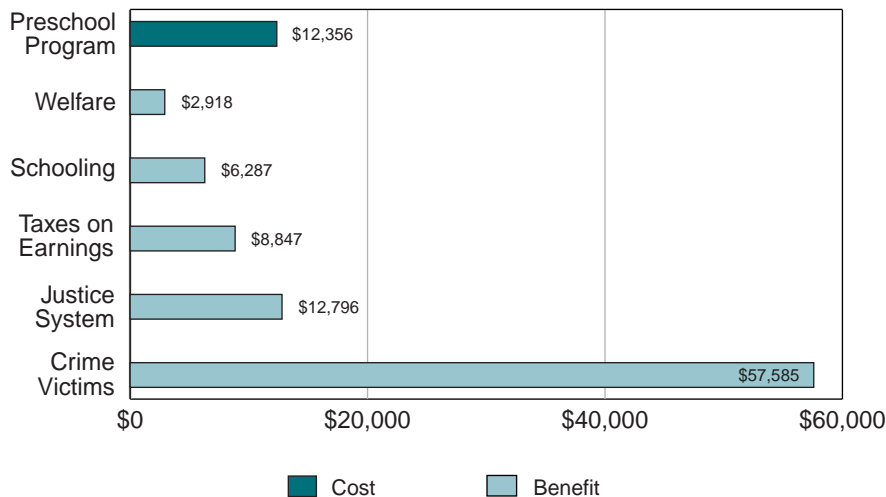
- ◆ **Public assistance.** Fifteen percent of the program group were receiving public assistance, versus 32 percent of the control group.
- ◆ **Monthly earnings.** Twenty-nine percent of the program group had monthly earnings of \$2,000 or more, versus 7 percent of the control group (36 percent versus 11 percent, respectively, when comparing only employed members in each group).
- ◆ **Household earnings.** When the income of the spouses of the study participants was taken into account, 47 percent of the program group had household income earnings of \$3,000 or more per month, versus 17 percent of the control group.

Figure 1: Major Findings of the High/Scope Perry Preschool Project for Participants Followed Up at Age 27



Source: High/Scope Educational Research Foundation. 1999. *High-Quality Preschool Program Found To Improve Adult Status*. Ypsilanti, MI: High/Scope Educational Research Foundation. Retrieved March 13, 2000, from the World Wide Web: <http://www.highscope.org/research/Perry%20fact%20sheet.htm>. Reprinted with the permission of the High/Scope Educational Research Foundation.

Figure 2: Public Costs/Benefits per Participant in the High/Scope Perry Preschool Study



Source: High/Scope Educational Research Foundation. 1999. *High-Quality Preschool Program Found To Improve Adult Status*. Ypsilanti, MI: High/Scope Educational Research Foundation. Retrieved March 13, 2000, from the World Wide Web: <http://www.highscope.org/research/Perry%20fact%20sheet.htm>. Reprinted with the permission of the High/Scope Educational Research Foundation.

- ◆ **Home ownership.** Thirty-six percent of the program group owned a home, versus 13 percent of the control group.
- ◆ **Automobile ownership.** Thirty percent of the program group owned a second car, versus 13 percent of the control group.

Cost-Benefit Analysis

A cost-benefit analysis of the High/Scope Perry Preschool study indicates a savings to the public of more than seven times the initial investment per child, with a return of \$7.16 for every dollar spent (Barnett, 1993; see figure 2). When adjusted for inflation and a 3-percent discount rate, the investment in early childhood prevention resulted in a taxpayer return of \$88,433 per child from the following sources:

- ◆ Savings in welfare assistance (prior to welfare reform).
- ◆ Savings in special education.
- ◆ Savings to the criminal justice system.
- ◆ Savings to crime victims.
- ◆ Increased tax revenue from higher earnings.

An independent reanalysis is provided in a recent RAND Corporation report (Karoly et al., 1998; see figure 3). This report found that eliminating the largest and

least reliable savings category (savings to crime victims) still left a return of more than twice the initial investment. Savings to crime victims make up 65 percent of the total investment return in the earlier analysis (Barnett, 1993). Although victim savings should be considered a significant outcome and societal benefit of early childhood intervention, this factor is also distinct from the other factors that can be estimated based on direct governmental costs and savings. With victim savings factored out of the analysis, the largest savings category is in criminal justice costs (40 percent), followed by increased taxable revenue (26 percent), reduced educational services (25 percent), and reduced welfare costs (9 percent).

Early Childhood Risk Factors for Delinquency

An understanding of early childhood risk factors for delinquency is helpful to interpreting the success of the High/Scope Perry Preschool Project. One factor identified with risk for delinquency is poor language skills (Stattin and Klackenberg-Larsson, 1993). As a component of overall mental development, language functions as an indicator of later intelligence and is a critical factor in the relationship between

intelligence and delinquency. Additional early risk factors include poor attachment to caregivers (Egeland and Farber, 1984; Shaw and Bell, 1993), poor parenting skills (Hawkins et al., 1998; Loeber and Stouthamer-Loeber, 1986), and multiple family stressors (Fergusson and Lynskey, 1996; Shaw et al., 1998). These risk factors may not only directly affect delinquency but may also indirectly influence other factors that interact with delinquency, such as school- and community-related risk factors.

As demonstrated in the Prenatal and Early Childhood Nurse Home Visitation Program supported by OJJDP (Olds, Hill, and Rumsey, 1998), prenatal and early postnatal prevention are shown to reduce risk factors that contribute to the development of antisocial behavior in childhood. Early childhood intervention during the preschool years also offers an opportunity to halt the developmental trajectory toward delinquency and related behavioral disorders. Family support services help develop parenting skills, attachment, and coping mechanisms that have a positive effect on family stressors. A multicomponent approach to enhancing child development promotes protective factors and reduces risk factors by addressing the many systems and influences that affect a child's development.

Program Components and Related Risk Factors for Delinquency

The components of the High/Scope Perry Preschool Project affect a number of the early childhood risk factors associated with later delinquency and other behavioral problems. In addition to directly reinforcing early developmental processes in the educational setting, the program strengthens positive parenting skills.

The High/Scope Educational Research Foundation explains the effectiveness of the High/Scope Perry Preschool model in terms of empowerment, which includes developing skills for success by enabling children to be active and independent learners, helping parents to support the development of their children, and providing teachers with effective training and support (Schweinhart and Weikart, 1995).

Because an ongoing home-school relationship enhances socialization, involving parents early in the educational process

is critical to the later success of participants in an early childhood intervention such as High/Scope Perry Preschool (Seitz, 1990). Weekly home visits by teachers and regular parent group meetings promote the strengthening of parent-child relationships and increase parent involvement in the educational process. A more recent OJJDP longitudinal study, the Rochester Youth Development Study (Thornberry et al., 1998), confirmed a significant relationship between parents' involvement in their children's lives and reduced delinquency.

In addition to enhancing parent attachment, parent involvement, and parenting skills, early childhood intervention aimed at both parents and children influences a child's attachment to school and later commitment to school success (Thornberry et al., 1998). Findings from the Rochester study confirm earlier research linking poor school attachment, commitment, and achievement to delinquent behavior and drug use (Krohn et al., 1995; Smith et al., 1995). Another OJJDP study, the Seattle Social Development Project (Hill et al., 1999), found that a lack of success in elementary school was linked to later gang membership. Even in the midst of multiple other factors placing youth at high risk for

delinquency, school success (as indicated by higher standardized test scores, school commitment, attachment to teachers, college aspirations, and parent expectations) appears to be a protective factor against delinquency (Smith et al., 1995). Academic achievement outcomes of the High/Scope Perry Preschool study indicate that the program group was more successful than the control group in school-related factors that appear to protect against delinquency.

The positive outcomes of the High/Scope Perry Preschool study are the result of a cumulative effect that begins with increased school readiness (Berrueta-Clement et al., 1987; Zigler, Taussig, and Black, 1992). School readiness results in positive reinforcement from teachers in the early grades followed by enhanced academic performance in subsequent grades and an overall stronger commitment to school. A correlational analysis of the High/Scope Perry Preschool data reveals a strong association between school motivation in the early years and literacy scores at age 19 (Schweinhart, Barnes, and Weikart, 1993). School motivation is also highly correlated with the highest year of schooling completed, which is associated with higher monthly earnings in adulthood and fewer lifetime arrests.

that address only educational factors, have not been shown to demonstrate significant results.

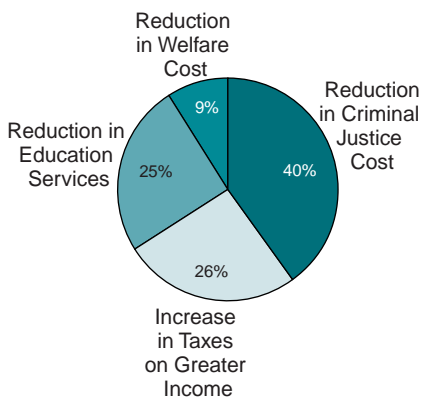
In addition to the need to target appropriate populations and address multiple risk factors in multiple domains, program quality is essential to success. The High/Scope Perry Preschool model is based on a high-quality educational approach that assumes a low staff-to-child ratio, an active learning curriculum, and a home visitation component that engages parents in the educational process. Furthermore, teachers are well educated, adequately compensated, and well supported in their tasks.

Head Start, perhaps the largest and best-known early childhood intervention program, has recently made efforts to expand and improve its effectiveness by emphasizing family support, staff training, and performance standards (U.S. Department of Health and Human Services, 1999). The 1994 legislation reauthorizing Head Start incorporated a number of recommendations from the Advisory Committee on Head Start Quality and Expansion (1993), including increased parent involvement, a lower staff-to-child ratio, and increased mental health services.⁴ Head Start has increased the emphasis on curriculum and child outcomes as a result of this reauthorization and has formed Head Start Quality Research Centers to respond to the need for additional research in the area of early childhood intervention. Further research is clearly needed to build on the limited existing knowledge base and assess the effectiveness of programs across various demographic groups, risk factors, and co-occurring factors that are related to delinquency, such as mental health issues and substance abuse (Yoshikawa, 1995).

Although the High/Scope Perry Preschool study's sample size was small in proportion to its eventual influence, its strong experimental design has contributed to its prominence in the field of early childhood education. Subsequent early childhood research that is carefully controlled and longitudinal in design remains limited. The limited research involving similar models that combine educational and family support components, however, supports the positive outcomes of the High/Scope Perry Preschool model. Subsequent independent evaluations of the programs that have

⁴Head Start Act Amendments of 1994, Pub. L. No. 103-252, tit. I, § 108, Stat. 624 (1994).

Figure 3: Costs, Savings, and Benefits of the High/Scope Perry Preschool Project



Source: Karoly, L.A., Greenwood, P.W., Everingham, S.S., Hoube, J., Kilburn, M.R., Rydell, C.P., Sanders, M., and Chiesa, J. 1998. *Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions*. Washington, DC: RAND Corporation. Reprinted with the permission of RAND Corporation.

Program and Policy Implications

The outcomes of the High/Scope Perry Preschool study demonstrate the value of prevention and early intervention efforts in promoting protective factors that reduce delinquency. The program was developed for high-risk children who stood to benefit the most from such an intervention. The intervention also affected multiple risk factors and was carried out in multiple domains (i.e., home and school). In an extensive review of early childhood interventions, Yoshikawa (1995) concluded that the combination of an early educational component with family support, as exemplified by the High/Scope Perry Preschool Project, is a determining factor in long-term effects on antisocial behavior. Other combination programs that have demonstrated long-term effects on delinquency include the Yale Child Welfare Project (Seitz and Apfel, 1994), Houston Parent Child Development Center (Johnson and Walker, 1987), and Syracuse Family Development Research Program (Lally, Mangione, and Honig, 1988). Single-component models, such as those

implemented the High/Scope model have rated those programs significantly higher than comparison programs, with 58 percent of High/Scope programs versus 40 percent of comparison programs being rated as high quality (Epstein, 1993). In addition, 72 percent of children in High/Scope programs versus 57 percent of children in comparison programs scored high on measures of emotional, social, cognitive, and motor development.

Some targeted, multicomponent early childhood interventions have been demonstrated to exceed their costs in eventual savings and benefit to the public. However, implementing an effective prevention strategy requires a commitment to provide empirically based quality programming and to invest the up-front resources that will result in long-term savings and positive social change in the lives of children and families. The High/Scope Perry Preschool Project provides one such model for early childhood intervention that has proven successful when executed with quality and commitment to long-term results. The complexity of juvenile delinquency requires multiple strategies that address the problem at various stages of development; early childhood intervention is one promising component in the context of a more comprehensive approach, as recommended in OJJDP's *Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders* (Wilson and Howell, 1993). The High/Scope Perry Preschool model is worthy of consideration as an effective early childhood intervention as communities attempt to implement a comprehensive strategy that includes prevention, intervention, and graduated sanctions (Howell, 1995; Wilson and Howell, 1993).

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