



*P*reventing Crime

What Works, What Doesn't, What's Promising

*By University of Maryland,
Department of Criminology and Criminal Justice*

Office of Justice Programs

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**PREVENTING CRIME:
WHAT WORKS, WHAT DOESN'T, WHAT'S PROMISING¹**

A REPORT TO THE UNITED STATES CONGRESS

Prepared for the National Institute of Justice

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OVERVIEW

by Lawrence W. Sherman

Mandate. In 1996 Congress required the Attorney General to provide a "comprehensive evaluation of the effectiveness" of over \$3 Billion annually in Department of Justice grants to assist State and local law enforcement and communities in preventing crime. Congress required that the research for the evaluation be "independent in nature," and "employ rigorous and scientifically recognized standards and methodologies." It also called for the evaluation to give special emphasis to "factors that relate to juvenile crime and the effect of these programs on youth violence," including "risk factors in the community, schools, and family environments that contribute to juvenile violence." The Assistant Attorney General for the Office of Justice Programs asked the National Institute of Justice to commission an independent review of the relevant scientific literature, which exceeds 500 program impact evaluations.

Primary Conclusion. This Report found that some prevention programs work, some do not, some are promising, and some have not been tested adequately. Given the evidence of promising and effective programs, the Report finds that **the effectiveness of Department of Justice funding depends heavily on whether it is directed to the urban neighborhoods where youth violence is highly concentrated.** Substantial reductions in national rates of serious crime can only be achieved by prevention in areas of concentrated poverty, where the majority of all homicides in the nation occur, and where homicide rates are 20 times the national average.

Primary Recommendation. Because the specific methods for preventing crime in areas of concentrated poverty are not well-developed and tested, the Congress can make most effective use of DOJ local assistance funding by providing better guidance about what works. A much larger part of the national crime prevention portfolio must be invested in rigorous testing of innovative programs, in order to identify the active ingredients of locally successful programs that can be recommended for adoption in similar high-crime urban settings nation-wide.

SECONDARY CONCLUSIONS. The Report also reaches several secondary conclusions:

o Institutional Settings. Most crime prevention results from informal and formal practices and programs located in seven institutional settings. These institutions appear to be "interdependent" at the local level, in that events in one of these institution can affect events in others that in turn can affect the local crime rate. These are the seven institutions identified in Chapter Two:

- | | |
|-----------------|------------------------------|
| * Communities | * Places (specific premises) |
| * Families | * Police |
| * Schools | * Criminal Justice |
| * Labor Markets | |

o Effective Crime Prevention in High-Violence Neighborhoods May Require Interventions in Many Local Institutions Simultaneously. The interdependency of these local institutions suggests a great need for rigorous testing of programs that simultaneously invest in communities, families, schools, labor markets, place security, police and criminal justice. Operation Weed and Seed provides the best current example of that approach, but receives a tiny fraction of DOJ funding.

o Crime Prevention Defined. Crime prevention is defined not by intentions or methods, but by results. There is scientific evidence, for example, that both schools and prisons can help prevent crime. Crime prevention programs are neither "hard" nor "soft" by definition; the central question is whether any program or institutional practice results in fewer criminal events than would otherwise occur. Chapter Two presents this analysis.

o The Effectiveness of Federal Funding Programs. The likely impact of federal funding on crime and its risk factors, especially youth violence, can only be assessed using scientifically recognized standards in the context of what is known about each of the seven institutions. Chapter One presents the scientific basis for this conclusion. Each of the chapters on the seven institutional settings concludes with an analysis of the implications of the scientific findings for the likely effectiveness of the Department of Justice Programs.

o What Works in Each Institution. The available evidence does support some conclusions about what works, what doesn't, and what's promising in each of the seven institutional settings for crime prevention. These conclusions are reported at the end of each of Chapters 3-9. In order to reach these conclusions, however, the Report uses a relatively low threshold of the strength of scientific evidence. This threshold is **far lower than ideal** for informing Congressional decisions about billions of dollars in annual appropriations, and reflect the limitations of the available evidence.

o Stronger Evaluations. The number and strength of available evaluations is insufficient for providing adequate guidance to the national effort to reduce serious crime. This knowledge gap can only be filled by Congressional restructuring of the DOJ programs to provide adequate scientific controls for careful testing of program effectiveness. DOJ officials currently lack the authority and funding for strong evaluations of efforts to reduce serious violence.

o Statutory Evaluation Plan. In order to provide the Department of Justice with the necessary scientific tools for program evaluations, the statutory plan for evaluating crime prevention requires substantial revision. Scientifically recognized standards for program evaluations require strong controls over the allocation of program funding, in close coordination with the collection of relevant data on the content and outcomes of the programs. The current statutory plan does not permit the necessary level of either scientific controls on program operations or coordination with data collection. Funds available for data collection have also been grossly inadequate in relation to scientific standards for measurement of program impact.

Chapter Ten presents a statutory plan for accomplishing the Congressional mandate to evaluate with these elements:

1. Earmark ten percent of all DOJ funding of local assistance for crime prevention (as defined in this Report) for operational program funds to be controlled by a central evaluation office within OJP.

2. Authorize the central evaluation office to distribute the ten percent "evaluated program" funds on the sole criteria of producing rigorous scientific impact evaluations, the results of which can be generalized to other locations nationwide. Allocating these funds for field testing purposes simply adds to the total funding for which any local jurisdiction is eligible. Thus the "evaluated program" funding becomes an additional incentive to cooperate with the scientific evaluation plan on a totally voluntary basis.

3. Set aside an additional ten percent of all DOJ funding of local assistance for crime prevention to support the conduct of scientific evaluations by the central evaluation office. This recommendation makes clear the true expense of using rigorous scientific methods to evaluate program impact. Victimization interviews, offender self-reported offending, systematic observation of high crime locations, observations of citizen-police interaction, and other methods can all cost as much or more than the program being evaluated.

DEPARTMENT OF JUSTICE FUNDING FOR LOCAL CRIME PREVENTION

Chapter One describes the basic structure and mechanisms for Department of Justice FY 1996 funding of State and local governments and communities for assistance in crime prevention. The two major categories are \$1.4 billion in funding of local police by the Office for Community-Oriented Policing Services (COPS), and \$1.8 billion in local crime prevention assistance funding of a wide range of institutions by the Office for Justice Programs (OJP).¹ This review examines both the relatively small funding for **discretionary** grants by DOJ, many of which are determined by Congressional "earmarks" to particular grantees and programs, and **formula** grants, which are distributed to State or local governments based on statutory criteria such as population size or violent crimes.

These are the principal OJP offices administering both types of grants: the Bureau of Justice Assistance administers the \$503 million Local Law Enforcement Block Grants, the \$475 million Byrne Formula Grants, and the \$32 Million in Byrne Discretionary Grants; the Office of Juvenile Justice and Delinquency Prevention administers the \$70 Million Juvenile Justice Formula Grants, and the \$69 Million Competitive Grants; the Violence Against

¹ Total FY 1996 funding for the Office of Justice Programs was \$2.7 billion, including \$228 Million in collections for the Office for Victims of Crime.

Women Grants Office administers the \$130 Million STOP Violence Against Women Formula Grants and \$28 Million in Discretionary Grants To Encourage Arrests; Corrections Program Office administers a \$405 Million Formula Grants for prison construction and a \$27 Million Grants Program for substance abuse treatment of prison inmates; the Drug Courts Program Office funds \$15 Million (from LLEBG) to local drug courts. The Executive Office of Weed and Seed administers the \$28 Million (from Byrne) Federal component of the Weed and Seed Program in selected high-crime inner-city areas.

SCIENTIFIC STANDARDS FOR PROGRAM EVALUATIONS

The Omnibus Crime Control and Safe Streets Act of 1968 defines an "evaluation" as "the administration and conduct of studies and analyses to determine the impact and value of a project or program in accomplishing the statutory objectives of this chapter."² By this definition, an evaluation cannot be only a description of the implementation process, or "monitoring" or "auditing" the expenditure of the funds. Such studies can be very useful for many purposes, including learning how to implement programs. But they cannot show whether a program has succeeded in causing less crime, and if so by what magnitude. Nor can the results be easily generalized.

The scientific standards for inferring causation have been clearly established and have been used in other Reports to the Congress to evaluate the strength of evidence included in each program evaluation. With some variations in each setting, the authors of the present Report use an adapted version of scoring system employed in the 1995 National Structured Evaluation by the Center for Substance Abuse Prevention. The system is used to rate available evaluations on a "scientific methods score" of 1 through 5. The scores generally reflect the level of confidence we can place in the evaluation's conclusions about cause and effect. Chapter Two describes the specific procedures followed in the application of this 1-5 rating system, as well as its limitations.

Deciding What Works

The scientific methods scores reflect only the strength of **evidence** about program effects on crime, and not the strength of the **effects** themselves. Due to the general weakness of the available evidence, the Report does not employ a standard method of rating programs according to the magnitude of their effect size. It focuses on the prior question of whether there is reasonable certainty that a program has any beneficial effect at all in preventing crime. The limitations of the available evidence for making this classification are discussed in Chapter Two. We note these limitations as we respond to the mandate for this Report and classify major local crime prevention practices in each institutional setting as follows:

² 42 U.S.C. Section 3791 (10)

What Works. These are programs that we are reasonably certain prevent crime or reduce risk factors for crime in the kinds of social contexts in which they have been evaluated, and for which the findings should be generalizable to similar settings in other places and times. Programs coded as "working" by this definition must have at least two level 3 evaluations with statistical significance tests **and** the preponderance of all available evidence showing effectiveness.

What Doesn't Work. These are programs that we are reasonably certain **fail** to prevent crime or reduce risk factors for crime, using the identical scientific criteria used for deciding what works.

What's Promising. These are programs for which the level of certainty from available evidence is too low to support generalizable conclusions, but for which there is some empirical basis for predicting that further research could support such conclusions. Programs are coded as "promising" if they found effective in at least one level 3 evaluation **and** the preponderance of the evidence.

What's Unknown. Any program not classified in one of the three above categories is defined as having unknown effects.

EFFECTIVENESS OF LOCAL CRIME PREVENTION PRACTICES

The scientific evidence reviewed focuses on the local crime prevention practices that are supported by both federal and local, public and private resources. Conclusions about the scientifically tested effectiveness of these practices are organized by the seven local institutional settings in which these practices operate.

Chapter 3: Community-Based Crime Prevention reviews evaluations of such practices as community organizing and mobilization against crime, gang violence prevention, community-based mentoring, and after-school recreation programs.

Chapter 4: Family-Based Crime Prevention reviews evaluations of such practices as home visitation of families with infants, preschool education programs involving parents, parent training for managing troublesome children, and programs for preventing family violence, including battered women's shelters and criminal justice programs.

Chapter 5: School-Based Prevention reviews evaluations of such practices as DARE, peer-group counseling, gang resistance education, anti-bullying campaigns, law-related education, and programs to improve school discipline and improve social problem-solving skills.

Chapter 6: Labor Markets and Crime Risk Factors reviews evaluations of the crime prevention effects of training and placement programs for unemployed people, including Job Corps, vocational training for prison inmates, diversion from court to employment placements, and transportation of inner-city residents to suburban jobs.

Chapter 7: Preventing Crime At Places reviews the available evidence on the effectiveness of practices to block opportunities for crime at specific locations like stores, apartment buildings and parking lots, including such measures as cameras, lighting, guards and alarms.

Chapter 8: Policing For Crime Prevention reviews evaluations of such police practices as directed patrol in crime hot spots, rapid response time, foot patrol, neighborhood watch, drug raids, and domestic violence crackdowns.

Chapter 9: Criminal Justice and Crime Prevention reviews the evidence on such practices as prisoner rehabilitation, mandatory drug treatment for convicts, boot camps, shock incarceration, intensively supervised parole and probation, home confinement and electronic monitoring.

EFFECTIVENESS OF DEPARTMENT OF JUSTICE FUNDING PROGRAMS

DOJ funding supports a wide range of practices in all seven institutional settings, although much more so in some than in others. Congress has invested DOJ funding most heavily in police and prisons, with very little support for the other institutions. The empirical and theoretical evidence shows that other settings for crime prevention are also important, especially in the small number of urban neighborhoods with high rates of youth violence. Thus the statutory allocation of investments in the crime prevention "portfolio" is lop-sided, and may be missing out on some major dividends.

The effectiveness of existing DOJ funding mechanisms is assessed at the end of each chapter on local crime prevention practices. The following list of major funding programs provides an index to the Chapters in which specific practices funded by each of them is discussed:

Community Policing: Chapters 8 and 10.

Local Law Enforcement Block Grant Program: Chapters 3, 7, 8 and 10.

Byrne Memorial Formula & Discretionary Grants Program: Chapters 3, 4, 5, 6, 8, 10.

Juvenile Justice Formula and Competitive Programs: Chapters 3, 4, 5, 8, 9 and 10.

Operation Weed and Seed: Chapters 3, 4, 8 and 10.

STOP Violence Against Women Grants: Chapters 3, 8, and 10.

Grants to Encourage Arrest Policies: Chapters 3, 8 and 10.

Violent Offender Prison Construction: Chapters 9 and 10.

Drug Courts Competitive Grants: Chapters 9 and 10.

CONCLUSION

The great strength of federal funding of local crime prevention is the innovative strategies it can prompt in cities like New York, Boston, and Kansas City (MO) where substantial reductions have recently occurred in homicide and youth violence. The current limitation of that funding, however, is that it does not allow the nation to learn **why** some innovations work, exactly **what** was done, and **how** they can be successfully adapted in other cities. In short, the current statutory plan does not allow DOJ to provide effective guidance to the nation about what works to prevent crime.

Yet despite the current limitations, DOJ has clearly demonstrated the contribution it can make by increasing such knowledge. The Department has already provided far better guidance to State and local governments on the effectiveness of all local crime prevention efforts than was available even a decade ago. Based on the record to date, only DOJ agencies, and not the State and local governments, have the available resources and expertise to produce the kind of generalizable conclusions Congress asked for in this report. The statutory plan this report recommends would enhance that role, and allow DOJ to accomplish the longstanding Congressional mandate to find generally effective programs to combat serious youth violence. By focusing that effort in the concentrated poverty areas where most serious crime occurs, the Congress may enable DOJ to reverse the epidemic of violent crime that has plagued the nation for three decades.

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Chapter One

INTRODUCTION: THE CONGRESSIONAL MANDATE TO EVALUATE

by Lawrence W. Sherman

For over three decades, the federal government has provided assistance for local crime prevention. Most of that assistance has been used to **fund** operational services, such as extra police patrols. A small part of that assistance has been used to **evaluate** operational services, to learn what works--and what doesn't--to prevent crime. Most of the operational funding to prevent crime, both federal and local, remains unevaluated by scientific methods (Blumstein et al 1978; Reiss and Roth, 1993).

The Congress has repeatedly stated its commitment to evaluating crime prevention programs. In the early years of local assistance under the Omnibus Crime Control and Safe Streets Act of 1968, it was "probably the most evaluation-conscious of all the social programs initiated in the 1960s and 1970s" (Feeley and Sarat, 1980: 130). In 1972, the Congress amended the Act to require evaluations of the "demonstrable results" of local assistance grants. In 1988, the Congress generally limited federal assistance under the Anti-Drug Abuse Act Byrne Grants to programs or projects of "proven effectiveness" or a "record of success" as determined by evaluations.¹ But then as now, the Congressional mandate to evaluate remains unfulfilled, for reasons of funding structure and levels inherent in local assistance legislation for three decades.²

This report responds to the latest in the long line of Congressional initiatives to insure that its local assistance funding is effective at preventing crime. It is a state-of-the-science report on what is known--and what is not--about the effectiveness of local crime prevention programs and practices. What is known helps to address the Congressional request for a scientific assessment of local programs funded by federal assistance. What is not known helps to address the underlying issue of the Congressional mandate to evaluate crime prevention, the statutory reasons why that mandate remains unfulfilled, and the scientific basis for a statutory plan to fulfil the mandate.

The report finds substantial advances in achieving the Congressional mandate in recent years. The scientific strength of the best evaluations has improved. The Department of Justice is making far greater use of evaluation results in planning and designing programs. Within the scope of severely constraining statutory limitations, the level of resources the Department of Justice has given to evaluation has increased. The 1994 Crime Act already contains piecemeal but useful precedents for a more comprehensive statutory plan to fulfil the mandate. By asking for this report, the Congress has opened the door for

¹ 42 U.S.C. 3782 Sec. 801 (b) (1), (19), (20).

² U.S. Attorney General's Task Force on Violent Crime, 1981, p. 73.

Exhibit 1

104TH CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

REPORT
104-378

MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF COMMERCE, JUSTICE, AND STATE, THE JUDICIARY, AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1996, AND FOR OTHER PURPOSES

DECEMBER 1, 1995.—Ordered to be printed

Mr. ROGERS, from the committee of conference,
submitted the following

CONFERENCE REPORT

Sec. 116

The conferees have agreed not to include section 120 as proposed in the Senate bill which would have required the Attorney General to reserve not less than two percent, but not more than three percent of the funds appropriated for the Local Crime Prevention Block Grant program, the Weed and Seed program, and the Youth Gang program under Juvenile Justice, to conduct a comprehensive evaluation of the effectiveness of these programs.

However, the conferees are aware that there is a diverse group of programs funded by the Department of Justice to assist State and local law enforcement and communities in preventing crime. The conferees are concerned that there has not been a recent comprehensive evaluation of the effectiveness of all of these programs and expects that nine months after enactment of this Act, the Attorney General shall provide to the Committees on Appropriations of both House and Senate, a thorough evaluation of the crime programs funded by the Office of Justice Programs, with special emphasis on factors that relate to juvenile crime and the effect of these programs on youth violence.

The conferees further expect that research for this evaluation will (1) be provided directly or through grants and contracts, (2) be independent in nature, and (3) employ rigorous and scientifically recognized standards and methodologies. It is further expected that the evaluation will measure, but shall not be limited to: (a) reductions in delinquency, juvenile crime, youth gang activity, youth substance abuse, and other high risk factors; (b) reductions in the risk factors in the community, schools, and family environments that contribute to juvenile violence; and (c) increases in the protective factors that reduce the likelihood of delinquency and criminal behavior.

a major step forward in using the science of program evaluation better to prevent crime. That step is a clearer definition of what "effectiveness" means, and a clearer plan for using impact evaluations to measure effectiveness.

THE MANDATE FOR THIS REPORT

In the 104th United States Congress, the Senate approved a major new approach to local assistance program evaluation. The Senate bill would have required the Attorney General to "reserve not less than two percent, but not more than three percent of the funds appropriated" for several local assistance programs to "conduct a comprehensive evaluation of the effectiveness of those programs." This would have been the first statutory plan to adopt the principle of setting aside a certain percentage of DOJ's operational funds **exclusively** for program evaluation--a principle often endorsed by the same operational leaders from whose funds would be affected,³ and one which has been adopted for other federal agencies.

The House version of the Justice Department's Appropriations bill did not include the evaluation set-aside plan, so a Conference Committee of the two chambers reached an agreement on this point. Rather than funding evaluations of the three specific programs named in the Senate version, the Conference Committee called for a comprehensive evaluation of the effectiveness of **all** Justice Department funding of local assistance for crime prevention. The Committee also required that the review be completed within nine months after the enactment of the legislation.

On April 27, 1996, the 104th United States Congress enacted the Conference Report (See Exhibit 1) requiring the Attorney General to provide an independent, comprehensive and scientific evaluation of the "diverse group of programs funded by the Department of Justice to assist State and local law enforcement and communities in preventing crime."⁴ The evaluation was required to focus on the **effectiveness** of these programs, defined in three ways:

- o preventing crime, with special emphasis on youth violence
- o reducing risk factors for juvenile violence, including those found in
 - community environments
 - schools
 - families

³ In 1988, for example, more than 30 big city police chiefs asked Congress to earmark ten percent of the Anti-Drug Abuse Act funds for research and evaluation. While Titles I and II of the 1994 Crime Act authorize DOJ to spend up to 3 percent of funds for assorted purposes including evaluation, there has never been a requirement to spend a percentage of operational funds exclusively on program impact evaluations demonstrating crime prevention effectiveness.

⁴ 104th Congress, First Session, House of Representatives, Report 104-378.

- o increasing protective factors against crime and delinquency

The legislation specifically required that the evaluation employ "rigorous and scientifically recognized standards and methodologies." In order to accomplish this task, the Assistant Attorney General for the Office of Justice Programs directed the National Institute of Justice (NIJ), in coordination with the Bureau of Justice Assistance (BJA), the Office of Juvenile Justice and Delinquency Prevention (OJJDP), and the Executive Office of Weed and Seed, to issue a competitive solicitation for proposals. On June 26, 1996, the National Institute of Justice released a solicitation that began the process of building the framework for this report to achieve the mandate of the 1996 legislation.

FRAMEWORK FOR THIS REPORT

This chapter presents the broad rationale for the framework used in this report. It begins with the scientific issues in the choice of the framework, and clarifies what the report is not. It sets the stage for the review with a brief introduction to the scope and structure of federal funding of local crime prevention programs. It then returns to the basic challenge of fulfilling the mandate to evaluate as an integral part of responding to the Congressional request for this report. The detailed plan for the rest of the report is then presented in Chapter Two.

Scientific Issues in The Choice of Framework

The 1996 legislation featured four key factors guiding the choice of methods for accomplishing the evaluation mandate: its **breadth**, its **timing**, its **scientific standards**, and its **independence**. The Justice Department programs in question cover a broad and complex array of activities. The short time period for producing the report ruled out any new evaluations of crime prevention effectiveness. Thus the requirement to employ scientific methods clearly implied a synthesis of already completed scientific studies.

The reliance on existing rather than new evaluations is clearly reflected in the NIJ solicitation, which called for "an evaluation review of the effectiveness of broad crime prevention strategies and types of programmatic activity...[including] family, school, and community-based strategies and approaches, as well as law-enforcement strategies." The solicitation defined more specifically how the evaluation was to be conducted:

It is expected that this evaluation will not conduct new studies or engage in any detailed analysis of existing data. Rather, the evaluation review and report should draw upon existing research and evaluation studies and comprehensive syntheses of this work to produce a critical assessment of the state of knowledge, including its generalizability and its potential for replication....Also, the review must explicitly examine the research in light of the outcome measures specified in the Act as described above.

The Assistant Attorney General decided to award a grant to an independent research group to accomplish this mandate. The legislation required that the review's content be "independent in nature," even if provided "directly" (by federal employees) or by independent contractors or grantees. An anonymous panel appointed by NIJ evaluated the proposals submitted in response to the solicitation. On the basis of the peer-review panel's report, the Director of the National Institute of Justice selected the University of Maryland's Department of Criminology and Criminal Justice in early August, 1996 to conduct the Congressionally mandated evaluation due on January 27, 1997.

Once the University of Maryland was selected as the independent contractor, the strategic choices for accomplishing the mandate shifted to the team of six senior scientists who wrote this report. All decisions about the project were left in the hands of the Maryland criminologists, who bear sole responsibility for the work. That responsibility includes the technical choices we made about how to employ "rigorous and scientifically recognized standards and methodologies" most effectively in the limited time available to complete the report. The principal decision was to define the scope of the report as follows:

a critical assessment, based on a growing body of science, of the effectiveness of a wide range of crime prevention strategies, operated at the local level, with and without the support of federal funds.

This report is thus a review of scientific evaluations of **categories** of local programs and practices that are supported by broad categories of federal funds--often by several different "programs" of funding. Using systematic procedures described in Chapter Two and the appendix, the report attempts to sort the science of local crime prevention programs and practices supported by DOJ. It focuses primarily on the direct evaluation of local program operations, and uses those findings selectively to support indirect and theoretical assessments of some national funding streams based on findings about their specific parts.

Direct Evaluations of Local Program Operations. What rigorous science can evaluate most reliably is the effect of a specific program operated at a local level. This report identifies over 500 studies that attempt to do just that, with varying levels of scientific rigor. In a few areas, the science is rigorous enough, the studies are numerous enough, and the findings are consistent enough for us to draw some reasonably certain and **generalizable** conclusions about what works, what doesn't, and what is promising at the local level of operation. Such conclusions are not yet possible for most local crime prevention strategies. That fact requires the report to address the starting point for the legislation mandating this report: the need for far greater investment in program evaluation. But the growing OJP support for program evaluation in recent years helps to provide the raw material for the core of this report.

Indirect Evaluations of National Funding. In an effort to be as responsive to the Congress as possible, this report makes selective use of another approach to the scientific

method. That approach uses evaluations of local programs to make indirect evaluations of federal funding streams. Those streams vary widely in their diversity, from funding streams of such relatively uniform programs as the hiring of the Crime Act's 100,000 police to very diverse Local Law Enforcement Block Grants program. The extent to which it is scientifically appropriate to generalize upwards from local program evaluations to national funding streams varies as well. In general, the more homogeneous the federal funding stream, the more appropriate it is to evaluate the effectiveness of that funding based on local evaluations.

Theoretical Assessments of Unevaluated Programs. Where no rigorously scientific impact data are available on funding streams expending substantial tax dollars, the report employs theoretical analyses to provide limited assessments of the programs. A prime example is the numerous efforts that OJP is currently making to prevent crime in the concentrated urban ghetto poverty areas producing the majority of serious youth violence in America. These programs attempt to be comprehensive in addressing the crime risk factors in those areas, which allows a comparison of the program content to the available theory and data on risk factors. The need for scientific impact assessments of these programs, however, is critical, and the theoretical assessment should be seen merely as a stopgap approach required by the current lack of measured effects.

Comprehensiveness

This report attempts to be as comprehensive as the available science allows. It is not, however, an annotated list of DOJ local assistance programs with a summary of scientific evidence relating to each one. Such an encyclopedic approach would have several limitations. It would fail to identify important issues cutting across programs. It would fail to give greater attention to the more important crime risk factors identified in the literature. Most important, it would have nothing to say about a great proportion of the specific program components of DOJ local assistance programs, given the lack of available impact evaluations.

While the report attempts some form of scientific commentary for the major DOJ prevention funding streams, it omits direct commentary on many of the smaller diverse funding categories. We attempt not to omit, however, any published program impact evaluations, meeting minimal standards of scientific rigor, that help show indirectly the effectiveness of the DOJ programs. Where such omissions have occurred, we anticipate that can be corrected in a systematic effort to keep the present findings up to date in future years.

What This Report Is Not

The Congressional mandate did not require that this report include an audit of the use of Department Of Justice (DOJ) funds, an evaluation of the leadership of DOJ's Office of Justice Programs (OJP) or Community Oriented Police Services (COPS) office, or a

process or descriptive evaluation of specific programs at the local level supported with DOJ funds. None of these tasks fall within the required assessment of the scientific evidence of the effectiveness of local assistance funds administered by DOJ in preventing crime and risk factors.

Not an Audit of DOJ. Congress did not require the Attorney General to provide a detailed accounting of how DOJ local assistance funds are being spent. That kind of analysis requires auditing rather than scientific methodologies; the legislation clearly indicated the use of science. Knowing exactly how much money is being spent on Drug Courts, for example, does not alter the conclusions that can be reached by using scientific methods to examine the available studies of the effectiveness of drug courts. The report's concern with the expenditure of DOJ funds was limited to four questions that informed a scientific assessment:

- 1) Does DOJ funding support this kind of crime prevention program or practice?
- 2) If not, does the scientific evidence suggest Congress should consider funding it?
- 3) Are current funds allocated in relation to scientifically established crime risk factors?
- 4) Have the funds been allocated in a way that permits scientific impact evaluation?

Not an Evaluation of DOJ Leadership. The term "evaluation" is often understood to mean something like a report card, reflecting on the personal effectiveness of officials directing programs. There is even a substantial scientific literature in the field of industrial psychology for personnel or performance "evaluation" systems. The legislation clearly does not call for a performance evaluation, but for an evaluation of program effectiveness. The Congressional mandate to focus on the science of the programs does not require assessments, positive or negative, about the performance of DOJ leadership. In order to standardize the focus on the evidence, the report does not even employ interviews with DOJ leadership, and relies solely on analysis of legislation, written documents and publications about the programs they administer.

Not A Descriptive or Process Evaluation of DOJ Programs. The Congressional mandate clearly focuses on what scientists call "impact" evaluations, rather than "descriptive" or "process" evaluations. The distinction between the two kinds of evaluation is critical, but often misunderstood. Descriptive or process evaluations describe the nature of a program activity, usually in some detail. An impact evaluation uses scientific methods to test the theory that a program causes a given result or effect. Only an impact evaluation, therefore, can be used to assess the "effectiveness" of a program. Descriptive evaluations can provide useful data for interpreting impact results based on variations in the implementation of programs and interpretations of their effects. But they do not provide a sufficient response to the Congressional mandate.

Not a Technical "Meta-Analysis." Scientists are making increasing use of a statistical methodology called "meta-analysis," in which findings from many studies are analyzed

together quantitatively. This method is important because it can produce different conclusions than a summary of findings from individual studies, largely by increasing the sample size available for analysis. There are no currently published statistical meta-analyses comparing the effectiveness of the full array of crime prevention strategies, from Head Start to prisons. There are several meta-analyses on specific crime prevention strategies included in the evidence used for this report. The Congressional requirements for rapid production of this report, however, ruled out a formal meta-analysis of the evaluation results across all crime prevention programs, however.

Evaluating Funding Mechanisms Versus Prevention Programs

The legislation did not define DOJ crime prevention "programs" as the large general funding streams. The focus on effectiveness clearly directs the report to specific crime prevention strategies. A substantial scientific literature is available on the crime prevention effectiveness of the specific strategies. We could find no existing **impact** evaluation, however, of such general funding streams as the Byrne Memorial State and Local Law Enforcement Assistance Program. This fact raises several key issues: the definition of "programs," the science of varying treatments, and the barriers such variations raise to direct evaluation of internally diverse national funding streams.

Defining "Programs." A major source of confusion in policy analysis of federal crime prevention is the meaning of the word "program." The meanings vary on several dimensions. One dimension is the level of government: if the federal Byrne Program funds a neighborhood watch program in Baltimore, which one is the DOJ "program" this report should evaluate for the Congress: Byrne or Baltimore's neighborhood watch? Or should the evaluation focus fall in between those two levels of analysis, addressing what is known generally about neighborhood watch programs? This report takes the latter approach.

The meanings of the term "program" also vary with respect to the required degree of internal uniformity. Neighborhood watch "programs," for example, are fairly uniform in their content, despite some variations. A national community policing "program," in contrast, embraces a far wider range of activities and philosophies, ranging from aggressive zero tolerance enforcement campaigns "fixing broken windows" (Kelling and Coles, 1996) to outreach programs building partnerships between police and all segments of the community (Skogan, 1990).

Science and Varying Treatments. The tools of the scientific method are only as useful as the precision of the questions they answer. Medical science, for example, evaluates the effectiveness of specific treatments; it is rarely able to establish the controls needed to evaluate broad categories of funding embracing multiple or varying treatments, such as "hospitals" or even "antibiotics." Variations in treatment place major limitations on the capacity of science to reach valid conclusions about cause and effect. The scientific study of aspirin, for example, assumes that all aspirin has identical chemical components; violating that assumption in any given study clearly weakens the science of aspirin

effectiveness. The same is true of crime prevention programs. The more a single program varies in its content, the less power science has to draw any conclusions about "the" program's content (Cohen, 1977; Weisburd, 1993).

Compare a study of the effects of a sample of 5,000 men taking aspirin to a study of the same sample taking different pills elected arbitrarily from an entire pharmacy of choices. Any changes in health would be more clearly understood with the aspirin study than with the pharmacy evaluation. Even if the whole pharmacy of pills were taken only on doctor's orders, based on a professional assessment of the most appropriate pills for each patient, wrapping all of the different pills' effects into the same evaluation of effectiveness would prevent an assessment of what effect each medicine had. Science is far more effective at evaluating one kind of pill at a time than in drawing conclusions about different pills based upon a pharmacy evaluation.

Direct Evaluations of National Funding Programs. Any attempt to evaluate directly an internally diverse national funding program is comparable to a pharmacy evaluation. Even if the right preventive treatments are matched to the right crime risks, a national before-and-after evaluation of a funding stream would lack vital elements of the scientific method. The lack of a control group makes it impossible to eliminate alternative theories about why national-level crime rates changed, if at all, with the introduction of a widely diverse national program like the Local Law Enforcement Block Grant. Federal funding of local crime prevention, for example, increased by over five hundred percent from 1994 to 1996, and violent crime has fallen steadily during that period. But violent crime started falling in 1992, for reasons that no criminologist can isolate scientifically. Isolating still further the effects of the increased funding in 1994 is not possible to do with rigorous scientific methods. Thus we could not have evaluated most national DOJ funding programs directly, even if we had been allowed several years or decades.

Implications of This Approach

The choice to start with the available science on local programs rather than the DOJ funding mechanism programs has important implications. One limitation is the report's unavoidable bias towards well-researched programs. One advantage is that the report becomes a reference source for different legislative approaches to federal funding. The approach also becomes a demonstration of how unevenly evaluation science can proceed, and the need for clear distinctions between science and policy analysis.

Bias Towards Well-Researched Programs. The report clearly emphasizes strategies that have received substantial research attention, regardless of their merits in receiving that attention. To the extent that the rigorous science has been focused on less promising crime prevention strategies, both the report and public policymaking are at a disadvantage. The alternative might have been to rely more on theoretical science and less on empirical results. The obvious danger in that course, however, is a risk of losing the objectivity required for reliable assessments. On balance, then, the decision to focus on the strongest

scientific evidence seems to be the most useful and least problematic approach available.

A Reference for Diverse Approaches to Federal Funding. Letting science guide the report around local programs may help the findings to have more lasting value. Organizing the evidence around theories and data will provide a reference for many different possible approaches to federal funding of local programs. While the structure of federal funding changes almost annually, the results of program evaluations accumulate steadily over long time periods. While the NIJ solicitation asked for special emphasis to be placed on evaluations completed in the last five years, many of the most important evaluation results are older than that. Omitting those earlier studies from the analysis would have substantially and inappropriately altered the conclusions reached. Similarly, Congressional deliberations on crime prevention policy can benefit from a reference source organized around the basic institutional settings for local crime prevention: communities, families, schools, labor markets, specific places, police, and criminal justice.

The Uncertainty of Science. Guiding the report with available findings offers a more realistic picture of what evaluation science is able to achieve. As the U.S. Supreme Court recently concluded, hypotheses about cause and effect cannot be "proven" conclusively like a jury verdict; they can merely be falsified using a wide array of methods that are more or less likely to be accurate.⁵ A Nobel Laureate observes that "Scientists know that questions are not settled; rather, they are given provisional answers..."⁶ Science is a constant state of double jeopardy, with repeated trials often reaching contradictory results. Fulfilling the mandate to evaluate will always result in an uneven growth of evaluation results, not permanent guidance. This report directly confronts the problems of mixed results from methods of varying scientific rigor, and attempts to develop decision rules for applying the findings to both research and program policy. These rules may have value not just for this report. They may also help advance the Congressional mandate to evaluate beyond the nonscientific concept of "proven" effectiveness to the scientific concept of "likely" effectiveness.

This problem of accurately predicting the effects of a program wherever it may be implemented is an important limitation to using evaluations in policy analysis. Generalizing results from an evaluation in one city to the effects of a program in another city is a very uncertain enterprise. We still lack good theories and research to predict accurately when findings can be accurately generalized. Just as the Justice Department may fund different kinds of community policing programs, the same program may be very different in different places. The nature of a "drug court" may vary enormously from one judge to the next,

⁵ Daubert v. Merrell Dow Pharmaceuticals, Inc., 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993), in which the Court adopts the scientific framework offered by Karl Popper, Conjectures and Refutations: The Growth of Scientific Knowledge, 5th Ed., 1989.

⁶ David Baltimore, "Philosophical Differences," THE NEW YORKER, January 27, 1997, p. 8.

community policing home visits may vary from friendly to intrusive, gang prevention programs may have different effects in different kinds of neighborhoods or ethnic groups. This uncertainty is best acknowledged, and addressed by ongoing evaluations of even programs with enough evidence to be judged "likely" to "work."

Science Versus Policy Analysis. The focus on scientific results should help the reader distinguish between the report's science and its policy analysis. The distinction is crucial. Even though scientific evaluation results are a key part of rational policy analysis, those results cannot automatically select the best policy. This is due not just to the scientific limitations of generalizing results from one setting to the next. Another reason is that evaluations often omit key data on cost-benefit ratios; the fact that a program is "effective" may be irrelevant if the financial or social costs are too high. This report attempts, where possible, to distinguish summaries of science from their application to policy issues using judgment and other sources of information outside the evaluation results. We expect that there will be less consensus about the policy analysis than about the scientific findings. But we also determined after extensive deliberation that recommendations based on policy analysis were a useful addition to the purely scientific summaries that form the core of the report.

The framework adopted for this report is not the only possible way to have responded to the Congressional request. There are legitimate differences of opinion about how best to use scientific methods for this kind of analysis. Some analysts have argued for a more "flexible" approach to program evaluation, with more emphasis on expert insight and less emphasis on whether a program "works" (Pawson and Tilley, 1994). Others call for less reliance on evaluation results that have less rigorous measurement of program context and other data needed to assess the generalizability of results (Ekblom and Pease, 1995). Our own preference would have been to raise the cutoff point for defining "scientific" methods much higher than we actually did (see Chapter Two). On balance, however, this approach provides an acceptable compromise between the Congressional needs for information and the scientific strength of available evidence.

There are also multiple goals for the \$4 Billion annual funding described in this report, which may be valuable for other reasons besides its scientifically measurable effectiveness in preventing crime. The focus on crime prevention excludes the very important goals of justice, fairness and equality under the law. That limitation is not inherent in the science of program evaluation; it is merely a function of the boundaries of the specific mandate for this report.

LOCAL CRIME PREVENTION AND THE DEPARTMENT OF JUSTICE

The policy context for this report is the current structure of local crime prevention assistance programs funded by the U.S. Department of Justice. This section provides a brief introduction to those programs. It begins with a summary of the appropriated budgets for local crime prevention in fiscal year 1996, the year the Congress requested this report.

It then describes the administrative structure of the Justice Department offices administering those funds. It concludes with a brief discussion of the types of funding mechanisms Congress has created for distributing the funding, and briefly details the focus and mechanisms of the largest of the funding programs.⁷

Budget

Local crime prevention offices now receive more DOJ funding than at any time in American history, a larger budget than the FBI, the DEA, or the INS. Among all DOJ components, only the Federal Bureau of Prisons consumes a larger share of the budget. At \$4 billion per year, the combined annual budget of the \$1.4 billion administered by the Director of the COPS (Community-Oriented Policing Services) Office and the \$2.6 Billion administered by the Assistant Attorney General for OJP (the Office of Justice Programs) is more than five times the amount the Congress allocated in the peak years of the old Law Enforcement Assistance Administration.

Not all of these funds can be classified as having crime prevention purposes. The largest of these programs, the 1994 Crime Act's Title I Community Policing grants, does not even specify the prevention of youth violence as a legislative purpose of the funding, even though many observers would expect youth violence prevention to **result** from the program. The definition of crime prevention as an intention or a result is a major issue addressed in Chapter Two, which explains this report's rationale in using a definition focused on results. This definition thus clearly include the 100,000 police. But even that broad definition does not include the State \$300 State Criminal Alien Assistance Program, reimbursing states for housing 38,000 illegal aliens incarcerated for felony offenses, or the \$31 million Public Safety Officers Benefits program for families of police slain in the line of duty. Nor does it include infrastructure programs for courts and computerization of criminal justice records, general programs of statistics, research and evaluation, services to victims of crime, the Police Corps, or general administrative costs. As Figure 1-1 shows, the major crime prevention funding programs within DOJ added up to about 85% of the \$4 billion total appropriations for the two local assistance offices (OJP and COPS), or about \$3.4 billion. The historical context of these appropriations levels is indicated in Figure 1-2, which shows the three-decade trends in total DOJ funding of its local crime prevention assistance offices (including services other than crime prevention).

The Department of Justice funding of local programs which may result in crime prevention are authorized under several different Acts of Congress. The Juvenile Justice and Delinquency Prevention Act is the oldest, having continued in force after the end of the Law Enforcement Assistance Administration. The 1988 Anti-Drug Abuse Act of 1988 authorized the Byrne Grants program to the states, followed by the 1994 Crime Act which took the local prevention funding to its current historic heights. The five principal titles of

⁷ This section is based largely upon a January 17, 1997 NIJ background memorandum from Jane Wiseman to Christy Visher prepared at the University of Maryland's request.

Figure 1-1**Major DOJ Crime Prevention Funding Programs**

OFFICE & BUREAU	FUNDING PROGRAMS	FY 1996 Funding
Community-Oriented Policing Services	100,000 Local Police	\$1.4 Billion
Office of Justice Programs		
Bureau of Justice Assistance	Local Law Enforcement Block Grant Formula Program	\$488 Million
	Byrne Memorial State and Local Law Enforcement Assistance Formula Program	\$475 Million
	Byrne Discretionary Grants Program:	\$32 Million
	(Boys and Girls Clubs Earmark)	(\$ 4 Million)
	(Nat'l. Crime Prevention Council Earmark)	(\$ 3 Million)
	(DARE Drug Abuse Prevention Earmark)	(\$ 2 Million)
Office of Juvenile Justice and Delinquency Prevention	Juvenile Justice Formula Grant Program	\$70 Million
	Competitive Grants Programs	\$69 Million
Executive Office of Weed and Seed	Operation Weed and Seed	\$28 Million
Violence Against Women Grants Office	STOP (Services, Training, Officers, and Prosecution) Violence Against Women Formula Grant Program	\$130 Million
	Rural Domestic Violence Enforcement	\$ 7 Million
	Encourage Arrest Program	\$ 28 Million
Corrections Program Office	Residential Substance Abuse Treatment	\$ 27 Million
	Violent Offender Truth in Sentencing Prison Construction Formula Grants	\$405 Million
Drug Courts Program Office	Drug Courts Competitive Grants	\$ 15 Million
Total Major Funding		\$3.2 Billion

the 1994 Act include Public Safety and Policing (Title I), Prisons (Title II), Crime Prevention (Title III), Violence Against Women (Title IV), and Drug Courts (Title V). While this report treats all five titles as falling within a results-based scientific definition of crime prevention, it is worth noting that the Congress has never appropriated any funds specifically labeled as "crime prevention" under Title III. Both the 1988 Anti-Drug Abuse Act and the 1996 Omnibus Appropriations Act, however, appropriated funds allowing grants to be made in a "purpose area" labeled crime prevention.

Administrative Structure

The administration of these various programs under various Acts is organized into the two separate offices. One of these--the Office of Community-Oriented Policing Services--has a single large program and a single presidential appointee. The other--the Office of Justice Programs--has numerous programs ranging widely in size, managed by an Assistant Attorney General, two Deputy Assistant Attorneys General, and five Presidentially appointed directors or administrators of the following units: the Bureau of Justice Assistance (BJA), the Bureau of Justice Statistics (BJS), the National Institute of Justice (NIJ), the Office of Juvenile Justice and Delinquency Prevention (OJJDP), and the Office for Victims of Crime (OVC). In addition, several other OJP offices manage funding under separate Titles of the 1994 Crime Act: the Corrections Programs Office, the Office for Drug Courts, and the Violence Against Women Grants Office. The OJP Executive Office of Weed and Seed is supported by transfers of BJA Byrne Discretionary Grant appropriations under the 1988 Anti-Drug Abuse Act. Figure 1-1 summarizes the administrative and programmatic structure of the agencies administering the major local crime prevention programs. NIJ and BJS do not administer major local assistance grants for crime prevention purposes, although BJS does assist states in their implementation of the data systems requirements for compliance with the Brady Act. The Office of Victims of Crime is funded by fines collected by federal courts, and provides funding mostly for repairing the harm caused by crime; a few areas of potential crime prevention effects from OVC funding, such as its support for battered women's shelters, are noted in Chapter Four.

Funding Mechanisms: Formula, Discretionary, Earmarks, Competitive

The crucial point in understanding DOJ local crime prevention funding programs is the statutory plan for allocating the funding. The "funding mechanisms" of this plan vary across the different authorization Acts, and use different criteria even within each funding mechanism depending on the specific Act. Two basic types of funding mechanisms are "formula" or "block" grants versus "discretionary" grants. Many observers and grant recipients incorrectly assume these labels mean that local units are entitled to their funding under formula grants, while DOJ executives decide how to administer the discretionary grants. That assumption is incorrect. There are substantial legislative requirements constraining DOJ's allocation of "discretionary" funds, and there are also various legislative requirements that grantees must satisfy in order to become eligible to receive their "formula" funding.

The so-called Discretionary programs are constrained by Congress in three ways: earmarks, eligibility criteria, and competition. **Earmarks** are legislative directions in the Appropriations laws (as distinct from Authorization Acts) on how to spend certain portions of funds appropriated within a larger funding program, such as the \$11 million earmark for Boy's and Girls Clubs within the 1996 appropriation for the BJA Local Law Enforcement Block Grant Program and the \$4.35 Million earmark for the same organization under the Byrne Discretionary grants. Earmarks are both "hard" and "soft." Hard earmarks are written into legislation, usually with specific amounts to be spent and the specific recipient of the funding identified. Soft earmarks are based upon committee hearings and conference reports, such as the legislation for the present report, with or without specified amounts.

Eligibility criteria programs are only "discretionary" in the sense that DOJ officials must decide whether the applicants are eligible to receive the funds for which they apply. The applicants do not receive the funds unless they apply, and can demonstrate their eligibility in the application. Congress often requires, for example, that states pass certain state laws as a condition of eligibility for receiving federal funds under certain grant programs. The most famous example is perhaps the limitation of maximum state speed limits to 55 miles per hour that was for two decades an eligibility requirement for receiving federal highway construction funding. Similarly, the 1994 Crime Act makes state passage of "Truth-in-Sentencing" Legislation an eligibility requirement for prison construction grants. Once DOJ has proof of program eligibility, however, the determination of how much funding the applicant receives must follow the statutory allocation plan. All those receiving funds do so on the basis of a "formula" that may be based on population, crime rates, prison overcrowding rates or other factors. In addition, certain minimum amounts are often reserved for jurisdictions of certain size irrespective of the formula, such as the requirement that half of all funding for the 100,000 police be allocated to applicants from cities of over 150,000 people. In that particular case, the allocation is made at least in part on a first-come, first served basis.⁸ Thus a more accurate label for such funding mechanisms might be "discretionary eligibility formula grants."

Only ten percent of the total OJP appropriation is for **competitive** grants, the truly discretionary programs in which applicants must compete on the merits of issues other than simple eligibility for funding. DOJ officials usually establish different criteria appropriate for each program. Examples of criteria for these grants include innovative approaches, interagency collaboration, comprehensive targeting of crime risk factors, and potential impact of the program on the community. Examples of competitive local assistance programs include Drug Courts, Operation Weed and Seed, JUMP mentoring grants and Encourage Arrest Grants.

Formula grant programs, in contrast to discretionary programs, have no so-called

⁸ U.S. Department of Justice, Office of Community Oriented Policing Services, COPS Facts: "Cops More '96." Update September 18, 1996.

"eligibility" requirements, such as the passage of state laws. The allocation of funding is independent of such tests. Formula programs can, however, require that certain paperwork be satisfactorily completed. BJA Byrne grants, for example, require that an annual plan specify how the formula-determined allocation will be spent, and that evaluations of all grants made with formula allocations be forwarded to BJA. Failure to satisfy these requirements presumably has the same effect as in "discretionary eligibility" programs, which is to block the award of the funds.

These funding mechanisms offer relatively little discretion to DOJ in its choice of program areas or sites, but offers substantial direction to the state and local grant recipients. That policy choice is central to a continuing Congressional debate. Its relevance to this report is to show the centrality of the local programs chosen by the grant recipients in determining the effectiveness of this funding. It is the local decisions on which prevention programs to adopt, and not the Congressionally mandated actions by DOJ in allocating that funding, which largely determine the effectiveness of these broad funding streams in preventing crime.

Major Funding Stream Programs

This section briefly describes the major DOJ funding stream programs listed in Figure 1-1.

COPS. This program reimburses local police agencies for up to 75% of the salary and benefits of an additional police officer for three years, up to a maximum of \$75,000 per officer. It is a discretionary-eligibility-formula grant program in which funding is allocated on the basis of eligible applicant population size, with a minimum allocation requirement that 50 percent of the funds go to police departments serving cities of over 150,000 people. In addition to this "Universal Hiring Program" to which the Congress has restricted appropriations in 1997, the earlier years of the program offered various competitive grant programs for domestic violence, youth firearms, anti-gang initiatives, and other special purposes.

Byrne (BJA). The 1988 Anti-Drug Abuse Act established both formula and discretionary grant programs in memory of New York City Police Officer Edward Byrne, who was murdered while monitoring a crack house. The formula program awards funds to states developing plans for allocating grants, originally under 21 and now under 26 purpose areas: 1) drug demand reduction programs involving police, 2) multijurisdictional task forces against drugs, 3) domestic drug factory targeting, 4) community crime prevention, 5) anti-fencing programs, 6) white-collar and organized crime enforcement, 7) law enforcement effectiveness techniques, 8) career criminal prosecution, 9) financial investigations, 10) court effectiveness, 11) correctional effectiveness, 12) prison industries, 13) offender drug treatment, 14) victim-witness assistance, 15) drug control technology, 16) innovative enforcement, 17) public housing drug markets, 18) domestic violence, 19) evaluations of drug control programs, 20) alternatives to incarceration, 21) urban enforcement of street

drug sales, 22) DWI prosecution, 23) juvenile violence prosecution, 24) gang prevention and enforcement, 25) DNA analysis, 26) death penalty litigation. While each state is eligible to receive a minimum of 0.25 percent of total appropriations, the balance is allocated on the basis of state population as a proportion of the entire U.S. All Byrne funds must be matched by a 25% commitment of non-federal funds.

The BJA Byrne Discretionary Grants program is heavily earmarked for initiatives such as those indicated in Figure 1-1 (e.g., Boys and Girls Clubs, DARE) as well as programs well-established with Congressional understanding, such as Weed and Seed (see below). Over 5 percent of Byrne discretionary funds (\$3.1 million) went to program evaluation purposes in FY 1996, with another \$3.5 million allocated to program evaluation by the States from their formula grants.

Local Law Enforcement Block Grants (BJA). This is a formula grant program that awards funds to applying local governments based on their share of the their state's total Part I violent offenses (homicide, rape, robbery, aggravated assault) over the previous three years. The eight purpose areas for local expenditure of the grants are 1) police hiring, 2) police overtime, 3) police equipment and technology, 4) school security measures, 5) drug courts, 6) violent offender prosecution, 7) multijurisdictional task forces, community crime prevention programs involving police-community collaboration.

STOP Violence Against Women Block Grants (VAWGO). This is a formula grant program allocating funding to states and territories based upon population. Within each state, the grants must total at least 25% for law enforcement, prosecution, and victim services. A wide range of programs fall within each of these categories, including both domestic and stranger violence against women.

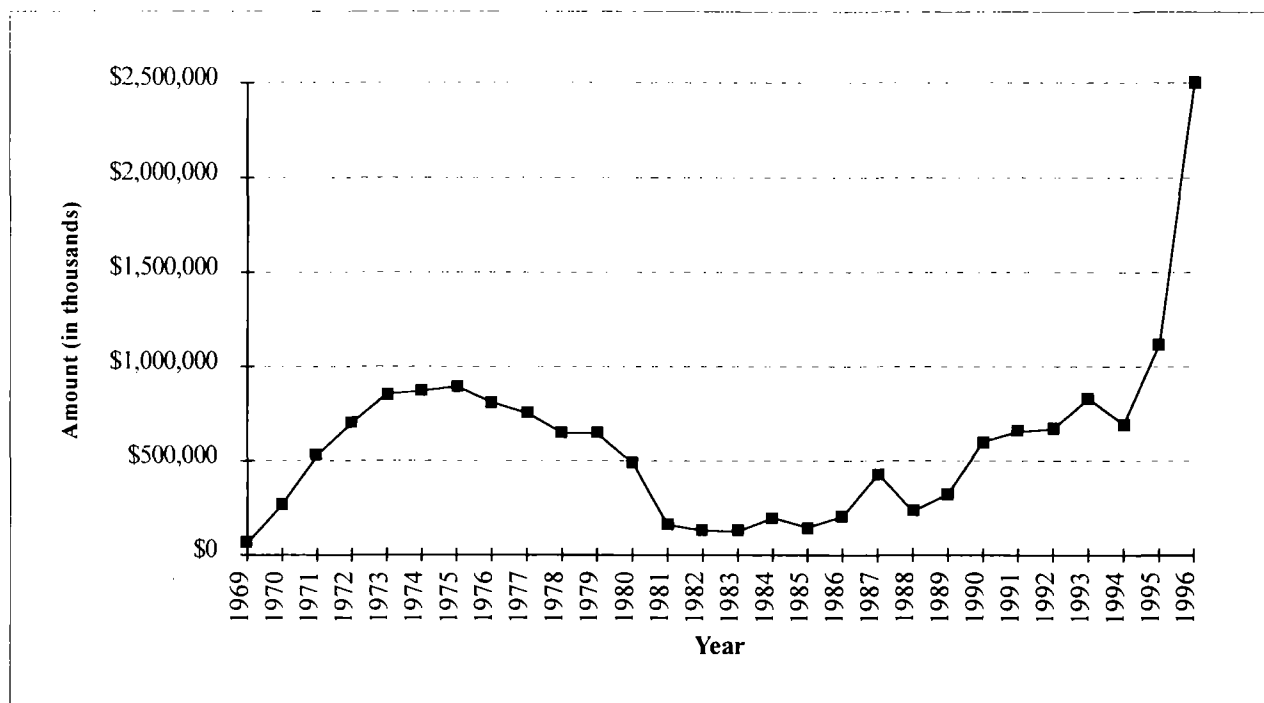
Encourage Arrest Grants (VAWGO). This is a competitive program for which eligibility is determined by the passage of certain state laws concerning the arrest of suspects about whom there is probable cause to believe they have committed an act of domestic violence or a related offense. These grants are intended to encourage communities to adopt innovative, coordinated practices that foster collaboration among law enforcement officers, prosecutors, judges, and victim advocates to improve the response to domestic violence.

Operation Weed and Seed (EOWS). This is a competitive program funded by a transfer of BJA discretionary Byrne funding to the OJP Executive Office of Weed and Seed. The program consists of long-term funding to a varying number of selected cities to help them create a comprehensive program of reducing crime in small, high-crime areas. The DOJ funding operates as seed money leveraging additional federal, state, local and private resources.

Juvenile Justice Formula Grants (OJJDP). This program provides annual funding to eligible states to deinstitutionalize status offenders, separate juveniles and adults in secure correctional facilities, jails and lockups, and to reduce the number of juveniles in secure

Figure 1-2

LEAA/OJP
Budgets, 1969 through 1996



facilities.

Prison Construction Grants (Corrections Office). This program provides funds to states to build more prison cells or to construct less expensive space for nonviolent offenders, to free space in secure facilities for more violent offenders.

Residential Correctional Drug Abuse Treatment (Corrections Office). This funding program funds state prison delivery of substance abuse treatment to inmates.

THE STATUTORY PLAN FOR PROGRAM IMPACT EVALUATION

In theory, one of the most effective federal crime prevention programs is the evaluation of local programs. The Attorney General's Task Force on Violent Crime called it the central role of the federal government in fighting crime, the one function that could not be financed or performed as efficiently at the local level.⁹ With less than one percent of local criminal justice budgets supported by the federal government (not counting the COPS program), federal funds are arguably most useful as a stimulus to innovation that makes the use of local tax dollars more effective (Dunworth, et al, 1997). The three-decade old Congressional mandate to evaluate is consistent with that premise. Its implication is that a central purpose of federal funding of operations is to provide strong evaluations.

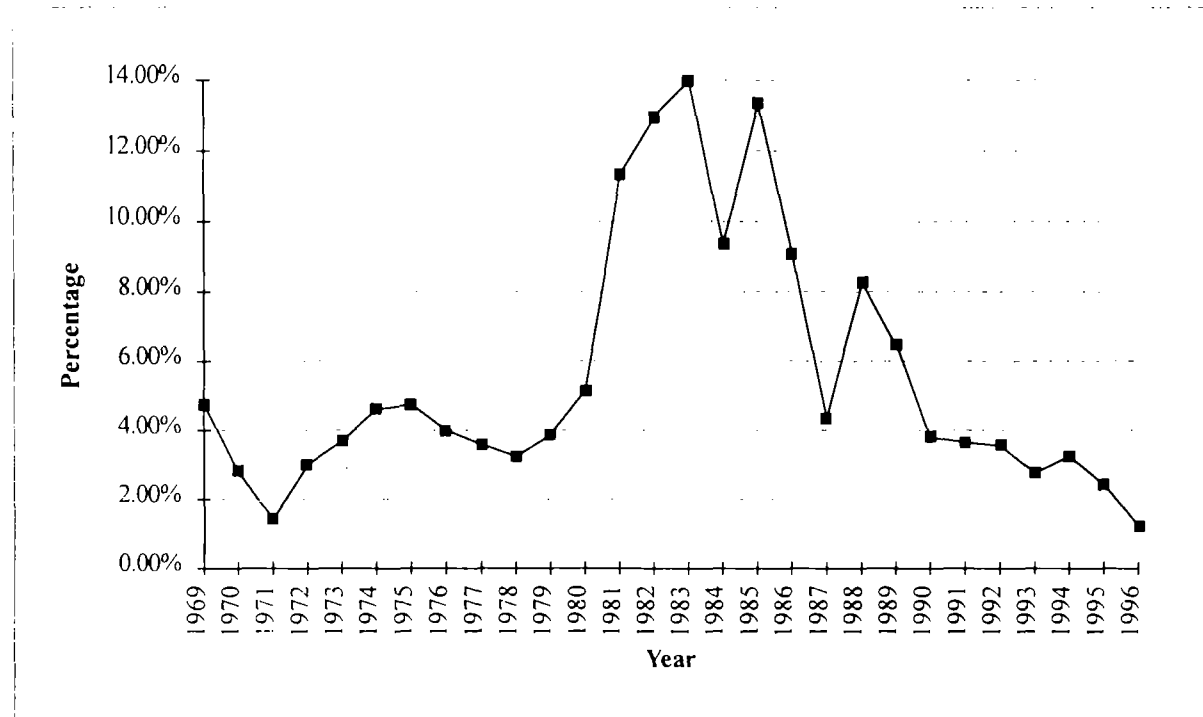
The Congressional mandate for this report therefore includes an evaluation of the effectiveness of DOJ-funded program evaluation itself. The central question is whether those evaluations have "worked" as a federal strategy for assisting local crime prevention. The report answers that question in a different fashion from the method used to evaluate the direct local assistance funding. Rather than directly evaluating the impact of program evaluations on crime, the report indirectly examines the antecedent question of whether those evaluations have succeeded in producing published and publicly accessible scientific findings about what works to prevent crime. After presenting the scientific framework for the review in Chapter two, the report presents the evidence for both program and evaluation effectiveness in Chapters Three through Nine. Chapter Ten then summarizes the limited evidence on local program effects, and returns to the underlying issue of how to accomplish the Congressional Mandate to evaluate.

This report concludes that the current statutory plan for accomplishing that mandate is inadequate, for scientific reasons not addressed by current legislation. That inadequacy substantially limits the capacity to judge the effectiveness of the federal effort to reduce serious crime and youth violence. Part of the statutory problem is simply inadequate

⁹ Attorney General's Task Force on Violent Crime, Report, 1981; James Q. Wilson, "What, if Anything, Can the Federal Government Do About Crime?" Presentation in the Lecture Series on Perspectives on Crime and Justice, sponsored by the National Institute of Justice with support from the Edna McConnell Clark Foundation, December, 1996.

Figure 1-3

NIJ Budget as Percentage of OJP Budget



funding. While Figure 1-2 shows the steep rise in total federal support for local crime prevention operations, Figure 1-3 shows a rough indication of the declining proportionate support for research and evaluation: the percentage of total OJP appropriations allocated to the National Institute of Justice.

Figure 1-3 actually overstates the amount of DOJ funding allocated to program evaluations. Program evaluations are also funded by OJJDP and BJA,¹⁰ and actual NIJ expenditure in FY 1996 was \$99 million rather than \$30 (due to inter-agency transfers).¹¹ But Figure 1-3 reflects the total NIJ budget for all research, technical assistance, and dissemination purposes, as a well as for program evaluation; only 27 percent (\$8 million) of NIJ's FY 1996 appropriation was allocated to evaluation. The proportionate allocation of the NIJ budget to evaluation over the past three decades has not changed substantially on this point. Thus while Figure 1-3 overstates the absolute dollars DOJ has been appropriated for evaluation, it is still an accurate portrayal of the absence of statutory attention to keeping evaluation funding commensurate with operational funding.

Evaluation funding alone, however, cannot increase the strength of scientific evidence about the effects of federally funded local programs on crime. Chapter Ten documents the need for adequate scientific controls on the expenditures of program funds in ways that allow careful impact evaluation. A statutory plan earmarking a portion of operational funds for strong scientific program evaluation is the only apparent means for increasing the effectiveness of federal funding with better program evaluations. The basis for this conclusion is central to scientific thinking about crime prevention, as the next chapter shows.

¹⁰ Total BJA expenditures on program evaluation in FY 1996 were \$6.6 million.

¹¹ Actual NIJ expenditures on all purposes included transfers authorized by the Assistant Attorney General for the Office of Justice Programs from Crime Act appropriations of \$15.6 million in FY 1995 and \$51.9 million in FY 1996.

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Chapter Two

THINKING ABOUT CRIME PREVENTION

by Lawrence W. Sherman

How effective at preventing crime are local programs with funding from the US Department of Justice? That question can only be answered in the context of a comprehensive scientific assessment of crime prevention in America. That assessment shows that most crime prevention results from the web of institutional settings of human development and daily life. These institutions include communities, families, schools, labor markets and places, as well as the legal institutions of policing and criminal justice. The vast majority of resources for sustaining those institutions comes from private initiative and local tax dollars. The resources contributed to these efforts by the federal government are almost negligible in comparison. The potential impact on local crime prevention of federally supported research and program development, however, is enormous.

The logical starting point for assessing the current and potential impact of federal programs is the scientific evidence for the effectiveness of crime prevention practices in each institutional setting. This requires, in turn, great attention to the enormous variation in the strength of scientific evidence on each specific practice or program. In general, far too little is known about the impact of crime prevention practices, regardless of how they are funded. But thanks largely to evaluations sponsored by the National Institute of Justice (NIJ), the Office of Juvenile Justice and Delinquency Prevention (OJJDP) and other federal agencies, the body of scientific evidence has grown much stronger in the past two decades. Most important, it has shown a steadily increasing capacity to provide very strong scientific evidence, even while most program evaluations remain so weak as to be scientifically useless.

The growing scientific evidence that federal support has produced allows us to assess some programs more intensively than others. Some of the evidence is strong enough to identify some effective and ineffective practices or programs in most institutional settings. Some evidence is more limited, but clearly points to some promising initiatives that merit further research and development. Reviewing this evidence in each of the seven institutional settings provides the strongest possible scientific basis for responding to the Congressional mandate. By separating the question of effectiveness from the question of funding, we map out the entire territory of crime prevention knowledge (including the many uncharted areas). That, in turn, provides a basis for locating both current and future Justice Department programs on that map.

Chapters Three through Nine of the report each examine the evidence in one institutional setting at a time. Each chapter draws scientific conclusions about program effectiveness, then uses those findings to suggest policy recommendations for both current programs and further research. Chapter Ten then assembles the major findings into the

Congressionally-mandated assessment of the effectiveness of DOJ crime prevention programs. It concludes the report with the implications of the assessment for the federal role in generating just such evidence, and suggests a statutory plan for improving scientific knowledge about effective crime prevention methods.

This chapter provides the four cornerstones on which the report is based. One is the crucial difference between the political and scientific definitions of crime prevention. Making this distinction at the outset is essential for meeting the Congressional mandate for a scientific assessment. It also helps us clarify other key concepts in thinking about crime prevention.

A second cornerstone is the web of institutional settings in which crime prevention effects are created every day all over the nation, mostly without any taxpayer involvement at all. From childhood moral education to employee criminal history checks, there is tight social fabric holding most people back from committing crimes most of the time. Yet there are many holes and thin spots in that social fabric that crime prevention programs might, and sometimes do, address.

The third cornerstone is the logical basis for separating scientific wheat from chaff, or strong scientific evidence from weak or useless data. Not all crime prevention evaluations are created equal, but we must be clear about the rules of evidence.

The fourth and final cornerstone is the history and current status of the federal role in guiding and funding local crime prevention. The distinction between those functions should be kept in mind in any discussion of the implications of crime prevention research for federal policy.

KEY CONCEPTS IN CRIME PREVENTION

Crime prevention is widely misunderstood. The national debate over crime often treats "prevention" and "punishment" as mutually exclusive concepts, polar opposites on a continuum of "soft" versus "tough" responses to crime: midnight basketball versus chain gangs, for example. The science of criminology, however, contains no such dichotomy. It is as if a public debate over physics had drawn a dichotomy between flame and matches. Flame is a result. Matches are only one tool for achieving that result. Other tools besides matches are well known to cause fuel to ignite into flame, from magnifying glasses to tinder boxes.

Similarly, crime prevention is a result, while punishment is only one possible tool for achieving that result. Both midnight basketball and chain gangs may logically succeed or fail in achieving the scientific definition of crime prevention: any policy which causes a lower number of crimes to occur in the future than would have occurred without that

policy.¹ Some kinds of punishment for some kinds of offenders may be preventive, while others may be "criminogenic" or crime-causing, and still others may have no effect at all. Exactly the same may also be true of other programs that do not consist of legally imposed punishment, but which are justified by a goal of preventing crime.

Crime prevention is therefore defined not by its intentions, but by its consequences. These consequences can be defined in at least two ways. One is by the number of **criminal events**; the other is by the number of **criminal offenders** (Hirschi, 1987). Some would also define it by the amount of **harm** prevented (Reiss and Roth, 1993: 59-61) or by the number of **victims** harmed or harmed repeatedly (Farrell, 1995). In asking the Attorney General to report on the effectiveness of crime prevention efforts supported by the Justice Department's Office of Justice Programs, the U.S. Congress has embraced an even broader definition of crime prevention: reduction of **risk factors** for crime (such as gang membership) and increases in **protective factors** (such as completing high school)--concepts that a National Academy of Sciences report has labeled as "primary" prevention (Reiss and Roth, 1993: 150). What all these definitions have in common is their focus on observed effects, and not the "hard" or "soft" content, of a program.

Which definition of crime prevention ultimately dominates public discourse is a critically important factor in Congressional and public understanding of the issues. If the crime prevention debate is framed solely in terms of the **symbolic** labels of punishment versus prevention, policy choices may be made more on the basis of emotional appeal than on solid evidence of effectiveness. By employing the scientific definition of crime prevention as a consequence, this report responds to the Congressional mandate to "employ rigorous and scientifically recognized standards and methodologies."² This report also attempts to broaden the debate to encompass the entire range of policies we can pursue to build a safer society. A rigorously empirical perspective on what works best is defined by the data from research findings, not from ideologically driven assumptions about human nature.

Bringing more data into the debate has already altered public understanding of several other complex issues. The prevention of disease, for example, has gained widespread public understanding of the implications of new research findings, especially those about lifestyle choices (like smoking, diet and exercise) that people can control themselves. The prevention of injury through regulation of automobile manufacturers has

¹ Some developmental criminologists distinguish factors and programs that help stop people from ever becoming offenders from those which help prevent further offenses after a first offense (e.g., Tremblay and Craig, 1995). Given the difficulty in detecting offenses hidden from the criminal justice system, however, this distinction is made primarily for purposes of program operation, and not for conceptual purposes.

² 104th Congress, H.R. Report 104-378, December 1, 1995, Section 116.

increasingly been debated in terms of empirically observed consequences, rather than logically derived theories; the safety of passenger-side airbags, for example, has been debated not just in terms of how they are supposed to work, but also in terms of data on how actual driver practices make airbags increasingly cause the deaths of young children.³ Emotional and ideological overtones of personal freedom and the role of government clearly affect debates about disease and injury prevention, but scientific evidence appears to have gained the upper hand in those debates.

Similarly, the symbolic politics of crime prevention could eventually give way to empirical data in policy debates (Blumstein and Petersilia, 1995). While the emotional and symbolic significance of punishment can never be denied, it can be embedded in a broader framework of crime prevention institutions and programs that allows us to compare value returned for money invested (Greenwood, et al, 1996). Even raising the question of cost-effectiveness could help focus policy-making on empirical consequences, and their implications for making choices among the extensive list of crime prevention efforts.

The value of a broad framework for analyzing crime prevention policies is its focus on the whole forest rather than on each tree. Most debates over crime prevention address one policy at a time. Few debates, either in politics or in criminology, consider the relative value of all prevention programs competing for funding. While scientific evidence may show that two different programs both "work" to prevent crime, one of the programs may be far more cost-effective than another. One may have a stronger **effect**, cutting criminal events by 50% while the other cuts crimes by only 20%. Or one may have a longer **duration**, reducing crimes among younger people whose average remaining lifetime is 50 years, compared to a program treating older people with an average remaining life of twenty years. A fully informed debate about crime prevention policy choices requires performance measures combining duration and strength of program effect. While such accurate measures of "profitability" and "payback" periods are a standard tool in business investment decisions, they have been entirely lacking in crime prevention policy debates.

Yet comparative measurement is not enough. Simply comparing the return on investment of each crime prevention policy to its alternatives can mask another key issue: the possible **interdependency** between policies, or the economic and social conditions required for a specific policy to be effective. Crime prevention policies are not delivered in a vacuum. A Head Start program may fail to prevent crime in a community where children grow up with daily gunfire. A chain gang may have little deterrent effect in a community with 75% unemployment. Marciniak (1994) has already shown that arrest for domestic violence prevents crime in neighborhoods with low unemployment and high marriage rates--but arrest **increases** crime in census tracts with high unemployment and low marriage

³ And as the policy debate relies increasingly on data, the importance of the scientific strength of the evidence becomes more visible. Asra Q. Nomani and Jeffrey Taylor, "Shaky Statistics Are Driving the Airbag Debate" WALL STREET JOURNAL January 22, 1997, p. B1.

rates. It may be necessary to mount programs in several institutional settings simultaneously--such as labor markets, families and police--in order to find programs in any one institution to be effective.

One theory is that **the effectiveness of crime prevention in each of the seven institutional settings depends heavily on local conditions in the other institutions.** Put another way, the necessary condition for successful crime prevention practices in one setting is adequate support for the practice in related settings. Schools cannot succeed without supportive families, families cannot succeed without supportive labor markets, labor markets cannot succeed without well-policed safe streets, and police cannot succeed without community participation in the labor market. These and other examples are an extension of the "conditional deterrence" theory in criminology (Tittle and Logan, 1973; Williams and Hawkins, 1986), which claims that legal punishment and its threat can only be effective at preventing crime if reinforced by the informal social controls of other institutions. The conditional nature of legal deterrence may apply to other crime prevention strategies as well. Just as exercise can only work properly on a well-fed body, crime prevention of all kinds may only be effective when the institutional context is strong enough to support it.

Over a century ago, sociologist Emile Durkheim suggested that "it is shame which doubles most punishments, and which increases with them" (Lukes and Scull, 1983, p. 62). More recently, John Braithwaite (1989) has hypothesized the institutional conditions needed to create a capacity for shame in both communities and individuals. He concludes that shame and punishment have been de-coupled in modern society, and suggests various approaches to restoring their historic link. His conclusions can apply to non-criminal sanctions as well, such as school discipline, labor force opportunities, expulsion from social groups and ostracism by neighbors and family. Conversely, it applies to rewards for compliance with the criminal law, such as respectability, trust, and responsibility. The emotional content of winning or losing these social assets is quite strong in settings where crime prevention works, but weak or counterproductive in what social scientists call "oppositional subcultures." Any neighborhood in which going to prison is a mark of prestige (Terry, 1993) is clearly a difficult challenge for any crime prevention practice.

The community context of crime prevention may need a critical mass of institutional support for informally deterring criminal behavior. Without that critical mass, neither families nor schools, labor markets nor places, police nor prisons may succeed in preventing crime. Each of these institutions may be able to achieve marginal success on their own. While most American communities seem to offer sufficient levels of institutional support for crime prevention, serious violence is geographically concentrated in a small number of communities that do not. Lowering national rates of violent crime might require programs that address several institutional settings simultaneously, with a meaningful chance of rising to the threshold of "social capital" (Coleman, 1992) needed to make crime prevention work.

To the extent that this theory focuses resources on the relative handful of areas

falling below that threshold, that focus can be justified by its benefits for the wider society. Over half of all homicides in the US occur in just 66 cities, with one-quarter of homicides in only eight cities (FBI, 1994). These murders are concentrated in a small number of neighborhoods within those cities. The public health costs of inner-city violence, by themselves, could provide sufficient justification for suburban investment in inner-city crime prevention. If crime can be substantially prevented or reduced in our most desperate neighborhoods, it can probably be prevented anywhere.

By suggesting that the effectiveness of some crime prevention efforts may depend upon their institutional contexts, we do not present a pessimistic vision of the future. While some might say that no program can work until the "root causes" of crime can be cured, we find no scientific basis for that conclusion--and substantial evidence against it. What this report documents is the potential for something much more precise and useful, based on a more open view of the role of scientific evaluation in crime prevention: a future in which program evaluations carefully measure, and systematically vary, the institutional context of each program. That strategy is essential for a body of scientific knowledge to be developed about the exact connections between institutional context and program effectiveness.

We expect that greater attention to the interdependency of institutions may help us discover how to shape many institutional factors simultaneously to prevent crime--more successfully than we have been able to do so far. The apparent failure of a few efforts to do just does not mean that we should give up our work in that direction. Such failures marked the early stages of almost all major advances in science, from the invention of the light bulb to the development of the polio vaccine. The fact that our review finds crime prevention successes in all of seven of the institutional settings suggests that even more trial and error could pay off handsomely. Our national investment in research and development for crime prevention to date has been trivial (Reiss and Roth, 1993), especially in relation to the level of public concern about the problem. Attacking the crime problem on many institutional fronts at once should offer more, not fewer, opportunities for success.

Defining crime prevention by results, rather than program intent or content, focuses scientific analysis on three crucial questions:

1. What is the independent effect of each program or practice on a specific measure of crime?
2. What is the comparative return on investment for each program or practice, using a common metric of cost and crimes prevented?
3. What conditions in other institutional settings are required for a crime prevention program or practice to be effective, or which increase or reduce that effectiveness?

The current state of science barely allows us to address the first question; it tells us almost nothing about the second or third. Just framing the questions, however, reveals the potential contribution that federal support for crime prevention evaluations could offer. That potential may depend, in turn, on a clear understanding of the location of every crime

prevention practice or program in a broad network of social institutions.

THE INSTITUTIONAL SETTINGS OF CRIME PREVENTION

Crime prevention is a consequence of many institutional forces. Most of them occur naturally, without government funding or intervention. While scholars and policymakers may disagree over the exact causes of crime, there is widespread agreement about a basic conclusion: strong parental attachments to consistently disciplined children (Hirschi, 1995) in watchful and supportive communities (Braithwaite, 1989) are the best vaccine against street crime and violence. Schools, labor markets and marriage may prevent crime, even among those who have committed crime in the past (Sampson and Laub, 1993), when they attract commitment to a conventional life pattern that would be endangered by criminality. Each person's bonds to family, community, school and work create what criminologists call "informal social control," the pressures to conform to the law that have little to do with the threat of punishment. Informal controls threaten something that may be far more fearsome than simply life in prison: shame and disgrace in the eyes of other people you depend upon (Tittle and Logan, 1973).

The best evidence for the preventive power of informal social control may be the millions of unguarded opportunities to prevent crime which are passed up each day (Cohen and Felson, 1979). Given the fact that most crimes never result in arrest (FBI, 1996), the purely statistical odds are in favor of a rational choice to commit any given crime. The question of why even more people do not commit crime is therefore central to criminology, and has driven many theories (Hirschi, 1969; Cohen and Felson, 1979; Gottfredson and Hirschi, 1990). The extent to which law enforcement can affect the perception of those odds is a matter of great debate (Blumstein, Cohen and Nagin, 1978), as is the question of whether even a low risk of punishment is too high for most people. Yet there is widespread agreement that the institutions of family and community are critically important to crime prevention.

That agreement breaks down when the institutions of family and community themselves appear to break down, creating a vacuum of informal social control that government is then invited to fill up (Black, 1976). Whether police, courts and prisons can fill the gap left by weak families and socially marginal communities is a question subject to debate in both politics and social science. But it may be the wrong question to ask, at least initially. The premise of the question is that the breakdown of the basic institutions of crime prevention is inevitable. Yet for over a century, a wide range of programs has attempted to challenge that premise. Entirely new institutions, from public schools to social work to the police themselves (Lane, 1992), have been invented to provide structural support to families and communities. In recent years, the federal government has attempted a wide range of programs to assist those efforts. Rather than simply assuming their failure, it seems wiser to start by taking stock of their efforts.

Settings, Practices and Programs

Crime prevention is a result of everyday practices concentrated in seven institutional settings. A "setting" is a social stage for playing out various roles, such as parent, child, neighbor, employer, teacher, and church leader. There are many ways to define these settings, and their boundaries are necessarily somewhat arbitrary. Yet much of the crime prevention literature fits quite neatly into seven major institutional settings: 1) communities, 2) families, 3) schools, 4) labor markets, 5) places, 6) police agencies and 7) the other agencies of criminal justice. The definitions of these settings for crime prevention are quite broad, and sometimes they overlap. But as a framework for organizing research findings on crime prevention effectiveness, we find them quite workable.

Crime prevention research examines two basic types of efforts in these seven settings. One type is a "**practice**," defined as an ongoing routine activity that is well established in that setting, even if it is far from universal. Most parents make children come home at night, most schools have established starting times, most stores try to catch shoplifters, most police departments answer 911 emergency calls. Some of these practices have been tested for their effects on crime prevention. Most have not. Some of them (such as police patrols and school teacher salaries) are funded in part by federal programs. Most are not. Regardless of the source of funding, we define a practice as something that may change naturally over time, but which would continue in the absence of specific new government policies to change or restrict them.

A "**program**," in contrast, is a focused effort to change, restrict or create a routine practice in a crime prevention setting. Many, but far from all, programs are federally funded. Churches may adopt programs to discourage parents from spanking children, or letting children watch violent television shows and movies. Universities may adopt programs to escort students from the library to their cars in the hours after midnight. Shopping malls may ban juveniles unescorted by their parents on weekend evenings, and police may initiate programs to enforce long-ignored curfew or truancy laws. In time, some programs may turn into practices, with few people remembering the time before the program was introduced.

Perhaps the clearest distinction between programs and practices is found among those programs requiring additional resources. The disciplinary practices of parents, for example, and the hiring practices of employers are largely independent of tax dollars. But calling battered women to notify them of their assailant's imminent release from prison may be a practice that only a federally funded program can both start and keep going. Even police enforcement of laws against drunk driving, in recent years, seems to depend almost entirely on federally funded overtime money to sustain (Ross, 1994). Whether these federal resources are "required" is of course a matter of local funding decisions. But in many jurisdictions, many practices begun under federal programs might die out in the absence of continued funding.

These distinctions are important to crime prevention for reasons of evidence: newly-funded programs are more likely to be subjected to scientific evaluations than longstanding practices. The modern trend towards demanding accountability for public expenditures has made program evaluations increasingly common, especially for federal programs. Paradoxically, we could know more about potentially marginal new ideas than we do about the mainstream practices of the major crime prevention institutions. Police DARE programs (Drug Abuse Resistance Education), for example, have been subjected to more numerous evaluations (Lindstrom, 1996) than the far more widespread practice of police patrol (Sherman and Weisburd, 1995). Similarly, neighborhood watch programs (Hope, 1995) have been subjected to far more extensive evaluation than the pervasive role of zoning practices in physically separating commercial and residential life in communities, reducing face-to-face contact among the kind of neighbors who used to see each other at the corner grocery store.

The availability of evidence on crime prevention is itself a major issue for the national policy debate. Where expenditures are high but evidence is weak or non-existent, the need for evaluation research is great. Even where expenditures are low, practices or programs that show good reason to conclude that they are causing or preventing crime should merit a high priority for research. In order to identify the key gaps in our knowledge, however, we must start not with the available evidence, but with an inventory of crime prevention practices and programs in each institutional setting. Throughout the report, this inventory guides our review of what works, what doesn't, what's promising, and what we need to know a lot more about.

Chapter 3: Communities

We begin our review with the most broadly defined institutional setting. From small villages to large urban neighborhoods, from suburban developments to urban high rise public housing, both the physical and social structure of communities varies widely. So, too, does their effectiveness in preventing crime through informal social controls. Some communities average more than two jobs per family; others average none. Some communities have more churches than taverns; others have more crack houses than grocery stores. Some have more people on welfare than working; others have more retirees than schoolchildren. Some have more renters than homeowners; others have more adult men who are technically homeless than those who are named on a lease or a deed. In some communities most residents recognize most other residents by name and face; in most of the modern United States, perhaps, even face recognition of most neighbors is extremely rare.

Communities also vary on several stark dimensions. Most of the serious violent juvenile crime in the US is concentrated in a relative handful of communities (OJJDP, 1996). Some communities have homicide rates 20 times higher than the national average (Sherman, Shaw and Rogan, 1995). In some communities two-thirds of all adults are chronically unemployed (Wilson, 1996: 19). In some communities 90% or more of the

population is African-American for miles around, a condition of "hypersegregation" unprecedented in American history (Massey and Denton, 1993). In some communities child abuse is reported among 19% of at-risk children of white parents (Olds, et al, 1986). To a large extent, the entire rationale for the federal politics of crime prevention is driven by the extreme criminogenic conditions of these relatively few communities in the US, areas of concentrated poverty where millions of whites and an estimated 1/3 of all African-Americans reside.

Where a community winds up on these and other dimensions may not only affect its crime prevention practices. There is also substantial evidence that these factors condition the effectiveness of community-based crime prevention **programs** (Hope, 1995), another excellent (but rare) example of interdependency. In study after study, evidence emerges that crime prevention programs are more likely to take root, and more likely to work, in communities that need them the least. Conversely, the evidence shows that communities with the greatest crime problems are also the hardest to reach through innovative program efforts.

Chapter Three reviews this evidence as pointing to the general conclusion that such programs are too weak to make a difference in the underlying structural conditions causing both crime prevention and innovative programs to fail. More heavily concentrated federal efforts to address many community factors simultaneously have, fortunately, suggested somewhat better results against local crime risk factors. And even in the midst of great adversity, there is some evidence that "big brother" and "sister" mentoring programs can help reduce drug abuse and other risk factors for crime--perhaps showing how much a community benefits by having strong families that provide their own mentoring, also known as parenting.

Chapter 4: Families

Perhaps the most basic structural feature of any community is the condition of its families. Basic family practices in child-rearing, marriage, and parental employment appear to matter enormously in the criminality of both children and fathers (Hirschi, 1995; Sampson, 1986). The failure of many parents to marry has been the target of many programs for preventing extramarital pregnancy, especially among teenagers. The failure of many parents to provide consistent affection and discipline to children has been the target of other programs, from parent training to home visitation and consultation by nurses and other helpers. As Chapter Four shows, some of these programs are quite promising, with very encouraging evaluation results. Whether these programs, by themselves, can overcome the effects of surrounding a family with a high-crime community is unclear.

It is also unclear whether we have found the right programs for combatting domestic violence, arguably a major risk factor for crime found in the family setting. Most of these programs are delivered to families by the criminal justice system. These programs

unfortunately fail to reach the many families whose violence goes unreported to police. For the families the programs do reach, the scientific evidence is either discouraging or inadequate. Here again, the crime prevention programs seem to work best for the families in the strongest communities. Criminal justice programs may be least effective in the communities where family violence is most prevalent.

The major exception to this pattern is the use of battered women's shelters, an important emergency service at high-risk times for family violence. While shelters also lack clear evaluations showing crime prevention benefits, police data show the highest risk of such violence to lie in the immediate aftermath of the last domestic assault. Protecting women, and often their children, in that short time frame may well reduce total injuries from domestic violence, even if shelters cannot solve the underlying family violence. Yet even shelters are relatively less available in the poorest communities, compared to communities of greater social and financial resources.

Chapter 5: Schools

The most direct link between families and communities is presently found in schools. Measured purely by the amount of available time to reduce risk factors for crime, schools have more opportunity to accomplish that objective than any other agency of government. Succeeding at their basic job of teaching children to read, write and compute may be the most important crime prevention practice schools can offer. But too many schools are overwhelmed by a criminogenic community context, crippled by the lack of parental support for learning and the breakdown of order in the classrooms (Toby, 1982). While some schools succeed at teaching basic skills despite these challenges, the odds appear to be against it.

The most intensively studied crime prevention programs in schools, however, are unrelated to academic learning. More common are the efforts to use schools to reduce non-academic crime risk factors, including drug abuse and aggression. As Chapter Five demonstrates, the extensive record of scientifically evaluated prevention programs provides some guidance about which programs are most effective or promising. The evidence shows that school-based programs aimed at increasing resilience, for example, by teaching students "thinking skills" necessary for social adaptation, work to reduce substance use and are promising for reducing delinquency. Programs that focus not on individual students, but instead on school organizations, also work. Programs that simply clarify norms about expected behavior work. As in other settings, the success of school programs and practices is largely dependent on the school's capacity to initiate and sustain innovative programs. Schools situated in crime-ridden, disorganized communities are less likely to have the infrastructure necessary to support prevention programs, and are more likely to fail. That failure is usually more pronounced in communities with the weakest labor market demand for adult workers.

Chapter 6: Labor Markets

There is a long history of attempting to prevent the onset or persistence of criminality by pulling young people into the labor market for legitimate work (Cloward and Ohlin, 1960). Theoretical and empirical support for the crime preventive value of employment is generally quite strong in the longitudinal analysis of individual criminal careers (Sampson and Laub, 1993; but see Shannon, 1982, and Gottfredson, 1985). It is also found in experimental studies of the effects of criminal sanctions, which can deter offenders who are employed but backfire on offenders who are unemployed (Sherman, 1992). Macro-level data on the short-term effects of changes in the unemployment rate on crime are more mixed (Freeman, 1983, 1995), but the staggeringly high unemployment rates in our highest-crime communities are beyond dispute (Wilson, 1996).

Programs aimed at linking labor markets more closely to high crime risk neighborhoods and individuals could have substantial crime prevention benefits. As Chapter Six shows, however, only Job Corps programs have demonstrated success at enhancing the employment experience of severely unemployable persons, and even that evidence is scientifically weak. No program has yet shown success in tackling the unemployment rates of high crime neighborhoods. Yet of all the dimensions of neighborhood life, this one may have the most pervasive influence on crime. Neighborhoods where work is the exception rather than the rule may lack the discipline necessary for conventional life styles (Wilson, 1996). Marriage and two-parent family life deeply declines with the loss of labor markets for adult males, making men unnecessary as economic partners and husbands. If inner city communities of concentrated poverty are to be reclaimed as crime prevention institutions, reviving their local labor markets may be the most logical place to start. As jobs increasingly migrate to far suburbs beyond the reach of public transit, inner city workers with no cars may depend even more on recent innovative programs to link them to suburban labor markets.

Inner city employment may face an even tougher problem than geography, however. As employers become increasingly sensitive to concerns about potential theft and violence by their employees, they have won increasing access to measures of the criminality of prospective and current workers. One measure is official records of criminal convictions, which are more readily available now than at any previous time in US history (SEARCH Group, 1996). Another measure is drug testing in the workplace, which many employers require as a condition of employment. Both measures could either bar a worker from being hired or lead to their being fired. Extensive police crackdowns of recent years have given millions of young men criminal records for minor offenses (Blumstein, 1993; Tonry, 1995), limiting their employment prospects and perhaps increasing their likelihood of further and more serious criminality.

Yet labor markets may be most powerful in preventing crime precisely because they respond negatively to criminal histories. While employment may give would-be offenders a stake in society, its crime preventive value may hinge on the threat of losing that stake. Maintaining that threat without creating a large group of unemployable outcasts is a major

crime prevention challenge for the future of our labor market practices.

Chapter 7: Places

One of the most recently discovered "institutions" in American life is the "place" (Anderson, 1978; Oldenburg, 1990). From donut shops to taverns to street corners and hotels, there is a pattern of social organization uniquely constructed around very small locations that are usually visible to the unaided human eye. These places vary enormously in their populations, core functions and activities, crime rates and criminogenic risk factors like drugs and guns. Some places are so crime prone that they are labeled "hot spots" of crime (Sherman, Gartin and Buerger, 1989), among the 3% of addresses which produce 50% of reported crimes.

Regardless of whether these places cause crimes or merely act as "receptors" for them, the prevention of crime in places may have substantial effects at reducing total crime in the community. Even in high crime neighborhoods, most places are crime-free for years at a time (Pierce, Spaar and Briggs, 1988). The frequent recurrence of crimes in just a handful of locations makes the prevention of crime in such "hot spots" all the more important.

Security guards, cameras, alarm systems, safes and fences have all proliferated in the latter twentieth century, making private expenditures on crime prevention rival public spending. Whether these practices succeed in preventing crime is generally impossible to determine from the available research, given its limitations. Even where they do succeed at preventing crime in target places, it is unclear whether the total number of criminal events in society is reduced or merely displaced to other locations (Barr and Pease, 1990). But as the evidence reviewed in Chapter Seven shows, the control of criminogenic commodities like alcohol, cash and firearms (Cook and Moore, 1995) can make a great deal of difference in the rate of crime in limited access locations like airports and transit systems. Such strategies may even overcome the influence of surrounding high crime communities.

Our capacity to make a limited number of places into safe havens from crime may also form a paradox: the safer we make places for more advantaged people, the less public investment there may be in making less advantaged communities safe (Reiss, 1989). The use of metal detectors to create of gun-free zones has become a prized luxury, reserved for presidents and judges, airplane passengers and (more democratically) some school children. But it may also have reduced policymakers' concern about gun crime in the streets, especially the streets of poverty areas. People spending more money on private security may wish to spend less for public safety. While communities may be better off without their worst hot spots of crime, they cannot be made safe by place-based strategies alone. To the extent that crime prevention in places depletes efforts in other institutional settings, safe places in a dangerous community may be ultimately self-defeating. It is hard to imagine a democracy as a fortress society.

Chapter 8: Policing

The crime prevention effects of policing may pose the widest gap between academic and political opinion. While public opinion polls show consensus that police prevent crime, criminologists widely challenge that view. Citing a single, scientifically weak evaluation of police patrol presence (Kelling, et al, 1974), many criminologists generalize that variations in police practice or numbers can make little difference in crime (Gottfredson and Hirschi, 1990; Felson, 1994). This conclusion ignores a vast array of contrary evidence.

As Chapter Eight shows, there are many police practices that reduce crime, and some that even increase crime. The strength of police effects on crime is generally moderate rather than substantial, unless police presence drops to zero when patrols go on strike--at which point all hell breaks loose. The converse of that observation could be that massive increases of police presence focused in a small number of high crime communities have a major effect at preventing crime. While such concentrations have never been attempted for sustained periods of time, it is possible that a focused crime prevention strategy could rely heavily on police presence to regain a threshold level of public order and safety. Once beyond this threshold, the effectiveness of family, community, schools and the labor force could be substantially increased.

Community policing programs offer one opportunity to increase police presence in the highest crime communities. Like police resources generally, the 1994 Crime Act puts a large portion of its 100,000 police where the people are, but not where the crime is. The scientific evidence increasingly suggests the effectiveness of much greater concentration of federal funding in the neighborhoods which need police the most. While such policies would fly in the face of distributional politics (Biden, 1994), they are strongly implied (although not proven) by studies of police effects on crime in low and high crime areas. The Federal funding of police overtime could also be more effective if available funds were channeled to the small number of neighborhoods generating most of the handgun homicide in the nation.

Yet research also shows that police presence can backfire if it is provided in a disrespectful manner. Rude or hostile treatment of citizens, especially juveniles, can provoke angry reactions that increase the risk of future offending (Tyler, 1991). Flooding high crime communities with aggressive police could backfire terribly, causing more crime than it prevents, as it has in repeated race riots over the past quarter century. The challenge is to develop programs that make policing simultaneously more focused in **what** they do to prevent crime and more polite in **how** they do it.

Chapter 9: Criminal Justice

The full list of crime prevention practices and programs in criminal justice is very long indeed. We relegate them to a single chapter in an attempt to focus more attention on how such punishment programs compare to non-punitive prevention practices. Recent

reviews conclude there is very little evidence that increased incarceration has reduced crime (Reiss and Roth, 1993). Yet variations in how the criminal justice system treats admitted offenders can make a great deal of difference. The evidence reviewed in Chapter Nine finds encouraging support for more correctional use of drug treatment programs, rehabilitation programs in prison, and institutionalization of some juvenile offenders rather than community-based supervision.

The effectiveness of any correctional treatment, however, may depend upon the community, family, and labor market context into which the offender returns home. In a very important sense, correctional programs compete with the same home conditions that led the offender into correctional hands in the first place. Making corrections work, at least with the offenders it treats, may require the same changes of institutional context needed to make programs and practices in other settings more effective.

Chapter 10: Justice Department Funding for Local Crime Prevention Programs

It is important for the U.S. Congress to assess its own funding of local crime prevention programs in the context of these seven institutional settings for attempting--and sometimes achieving--crime prevention results. It may be even more important to understand the relationship among the seven settings, and the extent to which conditions in one affect conditions or results in another. Chapter Ten synthesizes the major findings from each institutional setting to draw broad conclusions about the effectiveness of DOJ local assistance programs. But many of the local programs and practices these funds support have never been evaluated with enough scientific rigor to draw conclusions based on direct evidence about their effects on crime. Chapter Ten therefore concludes with analysis and recommendations concerning the structure of program evaluation for local assistance funding, suggesting how to better achieve the longstanding Congressional mandate to evaluate.

Evaluating crime prevention is at best a delicate enterprise. Policymakers often think, incorrectly, that an evaluation is like an "audit" or trial in which the results are usually clear cut and definitive. Either the funds were spent or they weren't; either the program served its intended beneficiaries at a reasonable cost per client or it didn't. Such "audit" questions are much easier to answer than the "evaluation" questions of cause and effect, often stretching out over a lifetime of the targets of crime prevention efforts. The next section introduces some of the complications in drawing such conclusions scientifically. Chapter ten returns to those issues in terms of their implications for future evaluation policies for OJP funding. Rather than spending a little evaluation money on most programs in an "audit" model, the Congress would receive more return on investment by concentrating evaluation dollars on a few major examples of key programs in a field testing model.

MEASURING CRIME PREVENTION EFFECTIVENESS

A recent review of the crime prevention evaluation literature by two prominent English criminologists concluded the field was "dominated by....self-serving unpublished and semi-published work that does not meet even the most elementary criteria of evaluative probity (Eckblom and Pease, 1995:585-6). What they meant by "evaluative probity" was fairly basic to any inference of cause and effect. Measures of crime, for example, are very often missing from publicly funded crime prevention "evaluations," which simply describe how the program worked and whether it achieved its administrative objectives: services provided, activities completed. Despite the recent emphasis at reinventing government to focus on **results**, most crime prevention evaluations still appear to focus on **efforts**.

Crime Prevention and Other Worthy Goals

Many if not most government programs, of course, have multiple objectives. Even those which evaluations show ineffective at preventing crime may accomplish other worthy goals, such as justice and equality under the law. That is a very important consideration for policy analysis, one that deserves careful treatment. This report does not explicitly examine program effects in accomplishing other goals beyond those specified in the legislation: crime, especially youth violence, risk factors and (their converse) protective factors. That does not mean other goals are unimportant. Consideration of those other goals can be entirely appropriate in other contexts, and can be examined by scientific program evaluations. This report omits them necessarily in order to conserve resources for answering the specific question the Congress asked.

Whether the focus of an evaluation is on crime prevention or other goals, the distinction between descriptive and impact evaluations remains crucial. Training police on domestic violence issues, for example, may not directly reduce domestic violence. But descriptive evaluations reporting how many police were trained for how many hours are also unable to show whether other goals were accomplished. Causing police to treat domestic violence victims more politely, to provide more victim assistance, or to gather better evidence at the scene could all be important objectives of police training. Controlled experiments could show whether training accomplishes those important goals. Absent a strong scientific approach to program evaluation, however, descriptive evaluations of efforts say little about results for other goals besides crime prevention.

Classifying the Strength of Scientific Evidence

Even where evaluations attempt to measure crime prevention, they often lack the basic scientific elements needed for inferring cause and effect. While they may report lower crime rates among people who were served by a program than those who were not, the evaluations often fail to say which came first, the program or the crime rates. If crime prevention programs simply attract lower crime rate people, they cannot be said to cause those lower crime rates. Other evaluations include a temporal sequence, reporting that

crime dropped after a program was introduced, for example. But there may be many other reasons why crime went down besides the program. While comparison or "control" groups can be used to help eliminate those other possibilities, many evaluations fail to use them. Even when they are used, the comparison groups chosen are often too unlike the target groups given the program, so that the comparison does not plausibly show what would have happened without the program. Only a random selection of equally eligible program targets can conclusively eliminate alternative theories about the effects of a crime prevention program.

Thus we must confront a body of research in which the strength of the **evidence** varies as much as the strength of the crime prevention program **effects** reported in the research. Making sense of this evidence requires some scale for rating the strength of each study. While our analysis employs more complicated classifications (see Appendix 1), there are three basic elements we consider:

- 1) reliable and statistically powerful measures and correlations (including adequate sample sizes and response rates),
- 2) temporal ordering of the hypothesized cause and effect--so that the program "cause" comes before the crime prevention "effect," and
- 3) valid comparison groups or other methods to eliminate other explanations, such as "the crime rate would have dropped anyway."

The first element without the others arguably constitutes "weak" evidence, the first and second without the third comprise "moderate" evidence, and all three together define "strong" evidence. This standard sets aside the question of replication of results in repeated studies, since it is generally so rare in federal program evaluations. Such replicated results are "very strong" evidence compared to most program evaluations.

A SCALE OF EVIDENTIARY STRENGTH FOR CAUSE AND EFFECT

	Weak	Moderate
Strong		
1. Reliable, powerful correlation test	x	
2. Temporal ordering of cause and effect		x
3. Elimination of Major Rival Hypotheses		x

Our analysis employs a "methodological rigor" rating based on a scale adapted from one used in a recent national study of the effectiveness of substance abuse prevention efforts (Center for Substance Abuse Prevention, 1995). Using this **scientific methods scale**, we rate seven different dimensions of the methods used in each study. The overall rating is based primarily on these three factors:

- o **the study's ability to control extraneous variables** (i.e., to eliminate major rival

hypotheses, accomplished through random assignment to conditions, matching treatment and comparison groups carefully, or statistically controlling for extraneous variables **the minimization of measurement error**

- o **the statistical power** to detect meaningful differences (e.g., the power of a test to detect a true difference. The smaller the anticipated effects of prevention, the larger the sample size must be in order to detect a true difference.)

Other considerations contributing to the overall rating of methodological rigor are the **response rate**, **attrition** of cases from the study, and the use of appropriate **statistical tests**. An appendix to this report describes the methodology rating in more detail and shows the coding sheet used to rate studies.

Using this scale, each eligible study examined for this report was given a "scientific methods score" of 1 to 5, with 5 being the strongest scientific evidence.⁴ While there are some minor variations in how the authors of Chapters Three through Nine apply the basic scientific methods criteria in making coding decisions, the criteria are standardized within each chapter and highly similar across chapters. In order to reach level 3, a study had to employ some kind of control or comparison group to test and refute the rival theory that crime would have had the same trend without the crime prevention program;⁵ it also had to attempt to control for obvious differences between the groups, and attend to quality of measurement and to attrition issues. If that comparison was to a more than a small number of matched or almost randomized cases, the study was given a score of "4".⁶ If the comparison was to a large number of comparable units selected at random to receive the program or not, the study was scored as a "5", the highest possible level; random assignment offers the most effective means available of eliminating competing explanations for whatever outcome is observed. Most of the tables summarizing evaluation research in the next seven chapters display these scientific methods scores right next to the reference to the study.

The scientific issues for inferring cause and effect vary somewhat by institutional setting, and the specific criteria for applying the scientific methods scale vary accordingly. Issues such as sample "attrition," or subjects dropping out of treatment or measurement, for example, do not apply to most evaluations of commercial security practices. But across all

⁴ The scores are based on direct examination of studies subjected to primary review (see Appendix). For studies summarized from secondary reviews, the scores are inferred from descriptions of research designs provided in the secondary reviews.

⁵ This criterion was employed by all chapters except for Chapter Seven, in which long time series analyses absent control groups were coded as level 3.

⁶ Chapter Five rates some studies as level four even without a large number of units in the comparison group.

settings, our scientific methods scale does include these core criteria:

1. Correlation between a crime prevention program and a measure of crime or crime risk factors
2. Temporal sequence between the program and the crime or risk outcome clearly observed, or a comparison group present without demonstrated comparability to the treatment group
3. A comparison between two or more units of analysis, one with and one without the program⁷
4. Comparison between multiple units with and without the program, controlling for other factors, or a non-equivalent comparison group has only minor differences evident
5. Random assignment and analysis of comparable units to program and comparison groups

In addition, the use of statistical significance tests is employed as a key criterion in reaching program effectiveness conclusions based on the application of the scores.

The report does not code scientific methods scores on evaluations of every program or practice considered. On many questions, recent literature reviews and meta-analyses by qualified scholars were readily available. The Office of Juvenile Justice and Delinquency Prevention, in particular, was very helpful in providing the draft report of its own group of independent scholars examining the problems of serious, chronic and violent juvenile offenders (Loeber and Farrington, forthcoming). The report uses two alternate procedures in relying on extant secondary reviews and meta-analyses. One is to use data presented in the reviews to score the key original research. The other is not to use any scoring, but merely to summarize the conclusions of the secondary review.

Risk and Protective Factors. The Congressional mandate for this report included risk and protective factors for crime and delinquency as outcome measures to be considered. Different approaches to the interpretation of these terms are offered in the literature. This report defines them as inversely related: the lower the level of a risk factor, the higher the level of a protective factor. For example, community labor force participation is a risk factor where it is low and a protective factor where it is high. To the extent that factors such as a secure personality or strong bonding to adults may be considered protective against independent risk factors (such as neighborhood unemployment), those protective factors can also be treated as risk factors when they are absent.

Deciding What Works

Clear conclusions about what works and what doesn't requires a high level of confidence in the research results. Such claims are always suspect in science, which is an

⁷ Chapter Five also requires that differences between treatment and control are known and partially controlled, while Chapter Seven substitutes long time series for control groups.

eternally provisional enterprise. New research results continue to fill in the gaps of our knowledge, and reanalysis of old results in light of the new findings often produces different conclusions. The best one can ever claim to "know" is what to conclude on the available evidence, pending the results of further research. Given the consequences of claim about "what works" can have major effects on crime prevention practice, it is important to use a high threshold for the strength of scientific evidence at any point in time.

The current state of the evidence, however, creates a dilemma in responding to the Congressional mandate. Using level 5 studies as the "gold standard" of evaluation design, the scientific methods scores for most of the available evaluations are low. The recommendations in Chapter 10 are designed to raise the methods scores of future evaluations of DOJ programs. The dilemma the current evidence poses is the question of how high to set the threshold for answering the Congressional question about program effectiveness: deciding what works. A very conservative approach might require at least two level 5 studies showing that a program is effective (or ineffective), with the preponderance of the evidence in favor of the same conclusion. Employing a threshold that high, however, would leave very little to be based upon from the existing science. There is a clear tradeoff between the level of **certainty** in the answers we can give to the Congress and the level of useful **information** that can be gleaned from the available science. On balance, excluding what can be said from moderately rigorous studies would waste a great deal of information that could be useful for policymaking. The report takes the middle road between reaching very few conclusions with great certainty and reaching very many conclusions with very little certainty.

Based on the scientific strength and substantive findings of the available evaluations, the report classifies all local programs into one of four categories: what works, what doesn't, what's promising, and what's unknown. The criteria for classification applied across all seven institutional settings are as follows:

What Works. These are programs that we are reasonably certain of preventing crime or reducing risk factors for crime in the kinds of social contexts in which they have been evaluated, and for which the findings should be **generalizable** to similar settings in other places and times. Programs coded as "working" by this definition must have at least two level 3 evaluations with statistical significance tests showing effectiveness **and** the preponderance of all available evidence supporting the same conclusion. Where the strength of the effect on crime is available in terms of standard deviations from the mean level of crime or risk, the effect size (Cohen, 1977) in both level 3 studies must exceed .1.

What Doesn't Work. These are programs that we are reasonably certain **fail** to prevent crime or reduce risk factors for crime in the kinds of social contexts in which they have been evaluated, and for which the findings should be **generalizable** to similar settings in other places and times. Programs coded as "not working" by this definition must have at least two level 3 evaluations with statistical significance tests showing ineffectiveness **and** the preponderance of all available evidence supporting the same conclusion. The effect size

standard for coding what works is also applied where available, which in the current report is limited to the school-based prevention programs.

What's Promising. These are programs for which the level of certainty from available evidence is too low to support **generalizable** conclusions, but for which there is some empirical basis for predicting that further research could support such conclusions. Programs are coded as "promising" if they have at least one level 3 evaluation with significance tests showing their effectiveness at preventing crime or reducing crime risk factors, **and** the preponderance of all available evidence supports the same conclusion.

What's Unknown. Any program not coded in one of the three other categories is defined as having unknown effects. The report lists some but not all such programs. This category includes major variations on program content, social setting, and other conditions which limit the generalizability even of programs coded as working or not. For example, it is unknown whether family training interventions repeatedly found effective in Oregon can work on the south side of Chicago.

The weakest aspect of this classification system is that there is no standard means for determining exactly what variations on program content and setting might affect generalizability. In the current state of science, that can only be accomplished by the accumulation of many tests in many settings with all major variations on the program theme. None of the programs reviewed for this report have accumulated such a body of knowledge so far. The conclusions about what works and what doesn't should therefore be read as more certain to the extent that the conditions of the field tests can be replicated in other settings. The greater the differences between evaluated programs and other programs using the same name, the less certain or generalizable the conclusions of this report must be.

What Works and Policy Conclusions

The uses of this report for policy conclusions require two additional cautions. One is that program evaluations alone are clearly insufficient as a basis for making policy. Other goals programs may achieve besides crime prevention need also to be examined. So must issues of relative cost-effectiveness that this report is unable to address. The current state of science cannot support detailed analyses of where crime prevention dollars can achieve the largest return on investment.

A second caution is that programs with unknown effects should not be judged deficient. A basic tenet of science is that the absence of evidence is not evidence of absence--of a cause and effect relationship. Merely because a program has not been evaluated properly does not mean that it is failing to achieve its goals. Previous reviews of crime prevention programs, especially in prison rehabilitation, have made that error, with devastating consequences for further funding of those efforts. In addressing the unevaluated programs, we must blame the lack of documented effectiveness squarely on the

evaluation process, and not on the programs themselves. Our analysis must also address programs for which there is little or weak evidence.

Given the risk of unevaluated programs being labeled ineffective, we attempt where possible to use indirect empirical evidence or theoretical analysis to provide some scientifically based assessment. For example, battered women's shelters have not been evaluated, but substantial epidemiological evidence shows that they protect women at a very high risk time for domestic violence. Thus indirect evidence suggests they should be effective at reducing domestic violence, even though the specific hypothesis remains untested. Such commentary beyond the scope of program evaluations seems, on balance, to be a reasonable attempt to fulfill the Congressional mandate for this report.

FEDERAL GUIDANCE VERSUS FEDERAL FUNDING

A recent analysis of police organizations concluded that "research and development is the core technology of policing" (Reiss, 1992). For police officers accustomed to thinking of guns, cars or even computers as their core technology, this statement may be quite surprising. Just as R & D is the core technology of both medicine and computer software manufacturing, however, so it is for crime prevention. This is no more true in policing than in the six other institutions. And for the federal government to leverage its scarce dollars in crime prevention, Professor Reiss's dictum may be truest of all.

The claim that R & D is a core technology for crime prevention provides a useful framework for considering the history of the federal government's role in state and local crime. That history can be seen as a struggle between **guiding** and **funding** local crime prevention, between an emphasis on R & D and an emphasis on program funding. The two are not necessarily exclusive, and can even be complementary to the extent that R & D becomes the basis for more effective use of program funding. That appears to be the premise of the Congressional mandate for this report. But any consideration of federal programs for local crime prevention must begin by noting the two separate, and clearly unequal, responsibilities Congress has assigned to the U.S. Department of Justice.

Historically, crime prevention R & D preceded local funding, and persisted during the decade in which funding was largely abolished. The following time line summarizes the two functions:

Program Funding							
Research & Development							
Years	1950s	1960	1965	1969	1980	1988	1996

Prior to World War Two, the federal role in local crime prevention was limited to investigation and prosecution of federal crimes, such as bank robbery. During the Eisenhower Administration, growing concern over juvenile delinquency led to research

within the Department of Health, Education and Welfare (HEW) Office of Children and Youth. These programs were expanded in the early Kennedy-Johnson administration, especially within the National Institute for Mental Health, which joined the Ford Foundation as a major source of funding for research on youth crime. (Ford and other foundations largely withdrew from the crime problem after the massive increases in federal funding in the 1970s). Many of the ideas emerging from that research, especially about community development, were to become key elements in the Johnson administration's War on Poverty.

In 1965, the federal role in local crime prevention moved beyond research into program development, and from HEW into the Department of Justice (DOJ). In the process, the federal role evolved into a practical emphasis on providing **guidance** to local authorities about preventing crime. The creation of the Office of Law Enforcement Assistance within DOJ led to grants supporting new ideas, such as the Family Crisis Intervention Unit. Developed as a partnership between the City University of New York and the New York City Police Department under an OLEA grant (Bard, 1970), this project became the first clear example of federal guidance, with these elements:

- o a locally-initiated innovative idea for a crime prevention program
- o federal funds to support a demonstration of the program in one location
- o federal funds to support an evaluation of the program in one location
- o federal funds to disseminate the results of the program nationwide

The success of the approach was dramatic. Within a few years after DOJ funded the demonstration in New York, hundreds of police agencies around the country had adopted a similar approach. The capacity of the federal government to help incubate a new idea and then distribute it to the nation was clear.

What was less clear was the capacity of the federal government to insure high scientific standards of program evaluation (Liebman and Schwarz, 1973). Using the scale of scientific methods employed in this report, the evaluation of the New York City project would have ranked a zero. While the program sought to reduce domestic violence, the evaluation contained no measurement of that crime problem, relying only on general crime statistics. There was no comparison of cases that were or were not assigned to the Family Crisis Intervention Unit, and no basis for determining its effectiveness. Yet when both the evaluation and the DOJ pronounced the program a success, the combined authority of science and the federal government led to widespread replication of the program using local tax dollars.

In the past three decades, the federal capacity to produce rigorous evaluation research has increased substantially. The federal role has helped the entire field of

criminology to grow in both the numbers and the experience of trained evaluation scientists; the number of doctoral programs in the field has also increased ten fold. The field itself has a much stronger body of knowledge about scientific issues in program evaluation, notably statistical power. The analysis presented in Chapter Ten suggests that the major limitations on better crime prevention evaluations today are not technical, but statutory. There is a clear need for a statutory plan specifying both the resources and the structure of the federal role in crime prevention R & D. In the absence of such a plan, a great deal of federal funds will be spent without any opportunity to measure their effectiveness at preventing crime.

Most of those funds will be spent on program funding for crime prevention, which have come, gone and returned to the federal role in local crime prevention. At the peak of the violent crime epidemic of the late 1960s, the idea of federal financing of local police and corrections had enormous bipartisan appeal. The Omnibus Crime Control and Safe Streets Act of 1968 was signed by President Johnson, and then implemented by President Nixon at a cost of almost \$1 Billion per year. The 1968 law increased the federal R & D role by creating what became the present National Institute of Justice, Bureau of Justice Statistics, and the Office of Juvenile Justice and Delinquency Prevention as part of the new Law Enforcement Assistance Administration (LEAA) in DOJ. But most of the billion was transferred back to the states, through each Governor's Office, for spending on a wide range of unevaluated programs. Some of the state expenditures, like tanks for rural police agencies, became so notorious that LEAA was ultimately abolished by Congress at the end of the Carter administration.

Operational program funding slowly returned to the federal role during the Bush administration, as part of the national war on drugs prompted partly by crack cocaine epidemics in several cities. Despite the urging of almost 40 big city police chiefs that Congress set aside even 10% of the drug war funding for federal R & D, the return of program funding contained no plan for evaluating its effectiveness. Just as in the 1960s design of the LEAA, Congress provided no statutory plan for developing usable knowledge from state and local programs funded by federal dollars. Sound evaluations, and the costs associated with them, remained the exception, not the rule. The Crime Bill of 1994 vastly increased program funding to historic highs, but provided almost no statutory language for measuring the effectiveness of the programs funded.

Discretionary reallocations of the 1994 funds by the Assistant Attorney General for Justice Programs have breathed new life into the R & D role, putting resources for measuring effectiveness to a new high level. The National Institute of Justice, for example, was only appropriated \$31 million in fiscal year (FY) 1996, but actually expended \$99 million. The additional funds came from allowable transfers of programmatic funds. In the short run, these reallocations seem likely to increase the scientific evidence available for assessing the effectiveness of crime prevention programs; even a year from now, for example, a report like this one should have many new findings from rigorous research. But in the long run, the role of R & D will remain marginal to the federal role without a

statutory plan for insuring its centrality.

The key issue for such a plan is the relationship between guiding and funding crime prevention. The two can proceed on largely separate paths, much as they have in the past. The result of that approach is an enormous opportunity cost, a lost chance to learn what works, what doesn't, and what's promising. By tying R & D more closely to program funding, the Congress can leverage taxpayer dollars to guide local crime prevention as well as supplement its funding. The record suggests that, dollar for dollar, the small federal investment in R & D has had far more effect on local crime prevention than the large federal investment in program funding (Blumstein and Petersilia, 1995). Program funding provides a tiny fraction of the financial capital invested in crime prevention. Research and development, in contrast, provides a very large fraction of the intellectual capital invested in local crime prevention. Program funding can be far more productive if it serves to enhance R & D.

Using program funding to enhance R & D is unlikely to happen without a Congressional mandate. No program can be properly evaluated as an afterthought. In contrast to a financial audit, a scientific evaluation requires data collection in advance of the program startup date. It also requires an element of control by the evaluators in how the program is delivered, in order to provide a valid evidence about cause and effect. While not all locations adopting a program need to be evaluated in this way, there must be at least a few "laboratory" locations in which controlled testing of crime prevention effects becomes scientifically feasible. Under current statutory funding arrangements, however, Congress imposes little requirement on funded programs to cooperate with evaluations, and little requirement on federal agencies to set aside program funds to support scientifically adequate evaluations.

This historical context sets the stage for the Congressionally-mandated review of program effectiveness. It reveals several key points to recall in reviewing the following chapters:

- 1) The vast majority scientific knowledge on the effectiveness of federal programs is itself the product of federal investment, primarily through DOJ; such knowledge is too costly to come from state and local tax dollars
- 2) The short supply of available knowledge is a direct reflection of federal under-investment in crime prevention R & D.
- 3) Federal program funding puts the cart before the horse, then fail to even harness the horse. Crime prevention programs are funded nationwide before they are evaluated, and then are funded in ways that make sound evaluation almost impossible to achieve.

This report is thus a scientific assessment of both federal crime prevention programs and federal policy for evaluating those programs. Defining crime prevention as a result

rather than an intention, the report maps out the charted and uncharted territory of crime prevention knowledge in each of its seven institutional settings. It distinguishes between strong and weak evidence for each part of that map, most of which is unfortunately far too weak. It then locates federal crime prevention programs on that map, many of which fall in uncharted territory. It concludes with an assessment of the federal role in improving that map, and a cost-effective plan for speeding up the rate of discovery.

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Chapter Three:

COMMUNITIES AND CRIME PREVENTION

by Lawrence W. Sherman

..many community characteristics implicated in violence, such as residential instability, concentration of poor, female-headed households with children, multiunit housing projects, and disrupted social networks, appear to stem rather directly from planned governmental policies at local, state and federal levels.

--National Academy of Sciences report, 1993¹

Communities are the central institution for crime prevention, the stage on which all other institutions perform. Families, schools, labor markets, retail establishments, police and corrections must all confront the consequences of community life. Much of the success or failure of these other institutions is affected by the community context in which they operate. Our nation's ability to prevent serious violent crime may depend heavily on our ability to help reshape community life, at least in our most troubled communities. Our good fortune is that the number of those troubled communities is relatively small. Our challenge is that their problems are so profound.

Serious violent crime is not a problem for most residential communities in the United States. In the suburban areas where most Americans live, the homicide rate is comparable to Finland's (FBI, 1994: 191; Reiss and Roth, 1993: 52). Half of all American homicides occur in the 63 largest cities, which only house 16% of the U.S. population. Homicides in those cities are also highly concentrated, in a handful of communities marked by concentrated poverty, hypersegregation (Massey and Denton, 1993), family disruption and high gun density. Almost 4% of all homicides in America involve gang members in Los Angeles County alone (Klein, 1995: 120). Serious violent crime in America is predominantly a matter of one particular kind of community, increasingly isolated and shunned by the rest of American society (Wilson, 1996).

The causation of inner-city crime has received extensive diagnosis (Wilson, 1987, 1996; Massey and Denton, 1993; Bursik and Grasmik, 1993; Sampson and Lauritsen, 1993). The prevention of inner-city crime has been attempted with extensive programs. The connection between causes and prevention, however, has been weak at best, and often nonexistent. More than any of the other institutional settings, the community setting shows a striking divergence of causal analysis and prevention programs. The causes, or at least

¹ Sampson and Lauritsen, 1993: 89.

the risk factors correlated with serious crime,² are basic and interconnected, while the programs are superficial and piecemeal. Federal policies from urban renewal to public housing may have done more to cause inner city violence than to prevent it (Sampson and Lauritsen, 1993: 89). For most of this century, community crime prevention programs have failed to tackle the governmental policies and market forces that fuel inner-city violence.

A central issue in the disconnection between causes and cures is the assumptions of how these communities "got that way." As William Julius Wilson has observed, "The segregated ghetto is not the result of voluntary or positive decisions on the part of the residents... [but is] the product of systematic racial practices such as restrictive covenants, redlining by banks and insurance companies, zoning, panic peddling by real estate agents, and the creation of massive public housing projects in low-income areas." The result of these forces in recent years has been called "hypersegregation:" historically unprecedented levels of geographic segregation by race and class, magnifying the effects of poverty and racial isolation (Massey and Denton, 1993). Yet community prevention programs address none of these causes of community composition and structure, which in turn influence community culture and the availability of criminogenic substances like guns and drugs.

Ironically, a central tenet of community prevention programs has been the empowerment of local community leaders to design and implement their own crime prevention strategies. This philosophy may amount to throwing people overboard and then letting them design their own life preserver. The scientific literature shows that the policies and market forces causing criminogenic community structures and cultures are beyond the control of neighborhood residents, and that "empowerment" does not include the power to change those policies (Hope, 1995). It is one thing, for example, for tenants to manage the security guards in a public housing project. It is another thing entirely to let tenants design a new public housing policy and determine where in a metropolitan area households with public housing support will live.

Even the management of modest programs with federal support are often beyond the capacity of community organizations, especially where it is needed the most. The consistent evidence of the neighborhood watch programs, for example (Skogan, 1990: chapter 6), is that the more crime and risk factors a neighborhood suffers, the less likely it is to develop any organized activity to fight crime. When community organizations do get involved in administering federal funds, there are often major problems and scandals of financial mismanagement. "Empowering" local communities with federal funding often turns into no applications from the worst areas and red tape nightmares for the not-so-bad

² While community crime rates have clear correlations with risk factors, there is still no scientifically conclusive evidence of causation, for reasons summarized in Sampson and Lauritsen (1993) at pp. 75-83. Thus the term "cause" in this section is used flexibly to denote a high priority target for a public policy intervention, a risk factor whose elimination might reduce crime.

areas that do get involved.

The disconnection between causation and prevention is also clear in the official use of the term "comprehensive." To be comprehensive in addressing risk factors is very different from being comprehensive in mobilizing all available agencies of government. Recent "comprehensive" crime prevention programs merit the term more by agency participation than by risk factors. The fit between agencies and risk factors is good in a few cases, such as home nurse visitation to address single parent childraising practices (see Chapter 4). But many risk factors have no obvious agency to fix them. Even multi-agency coordination is no guarantee that the major risk factors, like hypersegregation and labor market isolation (see Chapter 6), will be addressed.

Thus the major causes of community crime problems are like handcuffs locking a community into a high crime rate. The most frequently evaluated community-based crime prevention programs do not attempt to break those handcuffs. Rather, they operate inside those constraints, attempting "small wins" within the limited range of risk factors they can manipulate. But until the handcuffs of race-based politics themselves are unlocked, many analysts expect relatively little major improvements from programs addressing only the symptoms of those constraints.

Given the disconnection between causes and cures, it is not surprising that program impact evaluations provide little strong evidence of effective crime prevention. Setting aside programs delivered in families, schools, labor markets, places or the criminal justice system, the number of evaluations of community-based programs is quite small and generally discouraging. While there have been some "small wins," like reduced vandalism and drug use in housing projects with recreational programs, there have been no scientifically documented "big wins" preventing violence in a concentrated urban poverty area. Within that context, community mobilization efforts, gang prevention programs, gun buybacks, social worker and recreation programs have generally failed to show much if any effect on crime.

Yet the evaluation methods for these programs have generally been quite weak, and there is no certainty that such programs are doomed to failure even though they sidestep the central causes reflected in the scientific literature. Amidst generally negative results from generally weak program evaluations, there are encouraging findings from some research that may merit further testing, even though other studies have found contradictory results:

- o **Gang violence prevention** has been effective in several case studies
- o **Community-Based Mentoring** prevented drug abuse in one rigorous experiment
- o **Afterschool Recreation** programs have reduced vandalism in public housing

These findings about community-based programs addressing "proximate" rather than

"root" causes suggest a strategy for developing national crime prevention policy. Both the Justice Department and the rest of the federal government are moving towards concentration of resources on high-crime inner-city areas, which one-third of all African-Americans reside (Massey and Denton, 1993: 77) and where community factors generate the high homicide victimization rate of young black males--which is twelve times higher than the average in the US population (Fingerhut and Kleinman, 1990). Whether the efforts now in planning can address the structural factors is an unanswered question. But a combination of programs addressing proximate causes and the structural factors may have the best chance of success.

It is also possible that the diagnosis of community crime causation is incomplete. Even in the face of profound urban problems, it may be possible to reduce substantially the level of serious crime. New York City homicides and shootings dropped in half in recent years, with no documented change in concentrated urban poverty. It is not clear how or why that reduction occurred. The leading theory is the application of the police methods found effective in the studies reviewed in Chapter Eight. No community-level prevention program (or demographic change) has emerged as an alternative, competing explanation. But it remains possible to design such a program, focused more on the proximate than on the root causes of serious violence, and to test it in a randomized trial on a large multi-city sample of urban poverty areas. Programs currently planned by the executive branch to improve inner-city conditions can be most beneficial if they are structured to allow such a rigorous evaluation, so the nation can be very clear about the precise effects of the program on crime.

This chapter compares scientific evidence about community risk factors for violent crime to the logic of community crime prevention programs. It briefly reviews some methodological issues in evaluating those programs. It then examines the limited impact evaluations of crime prevention programs based in community settings outside the institutions examined in the next six Chapters. The chapter concludes by comparing the science of community-based crime prevention to major DOJ funding programs, with policy recommendations for both programs and research.

COMMUNITY RISK FACTORS FOR VIOLENT CRIME

The science of crime causation, while still in its infancy, offers more than a century of research on the community characteristics associated with higher risks of violent crime (Quetelet, 1842). By "community," this literature usually denotes residential areas of varying size within cities. These areas may be as small as blocks (Taylor and Gottfredson, 1986) or cover several square miles (Shaw and McKay, 1942). Much of this literature, recently reviewed for an NIJ-funded National Academy of Sciences Panel (Sampson and Lauritsen, 1993), uses rates of homicide and other serious violent crimes as the major focus.

One framework for classifying community risk factors distinguishes community composition, social structure, oppositional culture, legitimate opportunities, and social and physical disorder. Each of these apparent risk factors could be the focus of comprehensive community crime prevention programs. Most are not. Instead, as the National Academy of Sciences report suggests, "non-crime" government policies may have done more over the past four decades to enhance these risk factors than to reduce them. Perhaps the most visible example is the construction of public housing projects (Bursik, 1989), which in one study was followed by increased population turnover and increased crime rates independent of race.

Community composition refers to the kinds of people who live in a community. Unmarried or divorced adult males, teenage males, non-working adults, poor people, persons with criminal histories and single parents have all been identified in the literature as the kind of people whose presence is associated with higher rates of violent crime (Messner and Tardiff, 1986; Sampson, 1986; Curry and Spergel, 1988; Bursik and Grasmik, 1993). What is unclear in the literature is whether having more such people simply produces a higher total of individual level risk factors, or whether there is a "tipping" effect associated with the concentrations of such people (Sampson and Lauritsen, 1993). The latter theory derives from substantial findings on the effects of proportions in groups and corporations (Kanter, 1977): in which behavior of entire communities changes when a proportion of one type of person goes beyond the tipping point.

Public policies contributing to the concentration of high-risk people in certain neighborhoods include the federally funded highway system that took low-risk people out of urban neighborhoods to the suburbs (Skogan, 1986). The suburbanization of both white middle class people through highways, and black middle class people through federal open-housing laws (Wilson, 1987), helped tip the proportions of many inner city communities towards a majority of persons or families at higher risk of crime. As long as those high-risk families or persons were in a minority, their low risk neighbors were able to exercise a community protective factor against violent crime. When the high-risk families became a majority in many urban communities, a spiral of crime and the fear of crime led to further loss of middle class residents and jobs. This in turn increased the concentration of unemployed and poor people, followed by further increases in crime (Schuerman and Kobrin, 1986; Wilson, 1996.) No federal or local public policies have yet to counteract, or even challenge, these proportional imbalances.

Community Social Structure. Independently of the kinds of people who live in a community, the way in which they interact may affect the risk of violent crime. Children of single parents, for example, may not be at greater risk of crime because of their family structure. But a community with a high percentage of single parent households may put all its children at greater risk of delinquency by reducing the capacity of a community to maintain adult networks of informal control of children. The greater difficulty of single parent families in supervising young males is multiplied by the association of young males with other unsupervised young males, since delinquency is well-known to be a group

phenomenon (Reiss, 1988). The empirical evidence for this risk factor is particularly strong, with violent victimization rates up to three times higher among neighborhoods of high family disruption compared to low levels, regardless of other characteristics such as poverty, and the correlation between race and violent crime at the neighborhood level disappears after controlling the percentage of female-headed households (see Sampson and Lauritsen, 1993).

Other aspects of community structure include the prevalence of unsupervised male teenage groups, the density (or extent of overlap) among local friendship networks, and local participation in formal voluntary associations. Support for the inverse correlation of violent crime with voluntary association membership has been found at the block level in Baltimore (Taylor et al, 1984). Sampson and Groves (1989) found support for dense friendship networks as a protective factor and unsupervised teen groups as a risk factor for violence in the British Crime Survey. All of the risk factors have arguably been concentrated in urban neighborhoods by public policies. Skogan (1986) reviews the evidence on urban renewal's destruction of dense local friendship networks, uprooting entire neighborhoods; nationwide, 20 percent of all urban housing units occupied by blacks were demolished during the 1970s (Logan and Molotch, 1987: 114, as cited in Sampson and Lauritsen, 1993: 88). Wilson (1987) and Massey and Denton (1993) trace the history of public housing policy decisions that concentrated poor, black, female-headed households in limited areas rather than dispersing them amidst other kinds of families (Lemann, 1991). While community mobilization programs are designed in part to build voluntary association membership and increase informal social control, the evidence to date suggests that such efforts have not succeeded (Hope, 1995).

Oppositional Culture. Observers of high crime neighborhoods have long identified the pattern of "oppositional culture" arising from a lack of participation in mainstream economic and social life: bad becomes good and good becomes bad. Given the apparent rejection of community members by the larger society, the community members reject the values and aspirations of that society by developing an "oppositional identity" (Cohen, 1955; Clark, 1965; Braithwaite, 1989; Massey and Denton, 1993: 167). This is especially notable in terms of values that oppose the protective factors of marriage and family, education, work and obedience to the law. As inner-city labor force participation rates have declined (Wilson, 1996) and inner-city segregation has increased over the past three decades (Massey and Denton, 1993), the strength of the opposition has increased. Ethnographic studies of such cultures in recent years (e.g., Anderson, 1990) show more intense opposition than similar studies in the 1960s and 1970s (e.g., Liebow, 1967; Anderson, 1978), which found more widespread acceptance of mainstream values. Efforts to gain "respect" in oppositional cultures may then rely more on violence than on other factors (Anderson, 1990). Public policy has contributed to this primarily by its historical support for segregation and its modern failure to prevent its inner-city concentration, both by race (Massey and Denton, 1993: chapter 7) and joblessness (Wilson, 1996: chapter 3).

Criminogenic Commodities. Communities with very high rates of youth violence are

places in which there are high concentrations of criminogenic commodities (Cook and Moore, 1995). Both alcohol use (Collins, 1989) and drug use (Goldstein, 1989) are highly correlated with violent crime at the situational level of analysis (Miczek, et al, 1993), and gun use in crime generally causes greater risk of homicide (Cook, 1991; Reiss and Roth, 1993). Other evidence suggests that high crime communities appear to have very high concentrations of locations selling alcohol (Roncek and Maier, 1991) and drugs (Sherman and Rogan, 1995). Whether the disproportionate presence of these substances reflects market demand arising from oppositional culture or other reasons (including public policy) is an unresolved issue in the literature.

Social and Physical Disorder. Recent work on the "broken windows" (Wilson and Kelling, 1982; Kelling and Coles, 1996) theory of community crime causation suggests some support for the theory (Skogan, 1990). The theory claims that in communities where both people and buildings appear disorderly, the visual message that the community is out of control may attract more serious crime (Wilson and Kelling, 1982). This may happen by a spiral of increasing fear of crime among conventional people, who use the area less and thus provide less informal control. Communities that deteriorate in this respect over time are observed to suffer increased rates of violence (Schuerman and Kobrin, 1986). Public policies contribute to such declines through nonenforcement of building code violations (Hirsch, 1983) and of minor criminal conduct such as public drinking (Kelling and Coles, 1996). Demolition policies to reduce the unsightly appearance of decayed buildings may then also reduce neighborhood density of street populations, the effect of which is not clear in the literature; lower density may either increase the risk of violent crime (Wilson, 1996) or reduce it (Sampson and Lauritsen, 1993).

All of these risk factors and more are connected to broader debates about race, poverty, welfare, unemployment and family life in America. These debates often ignore the extreme inner-city concentrations of these risk factors. These concentrations are both extreme in each category and in their accumulation. Few neighborhoods in the US suffer nonemployment rates as high as 63 to 77 percent of all adults. The ones that do are also likely to suffer from weak social structure, high rates of alcohol abuse, gun carrying, drug abuse, and violent youth crime. To the extent that policy debates focus on these issues outside of the inner-city areas of concentration, it may fail to attack the interdependence between these risk factors.

EVALUATING COMMUNITY CRIME PREVENTION

In order to learn whether federal policies can at least reduce violent crime in such communities, both strong programs and strong scientific methods should help. In this context, "strong" programs would address multiple risk factors simultaneously, while "strong" scientific methods would isolate the separate effects of different program elements. Using these definitions, the current state of the science offers no strong tests of strong community crime prevention programs.

The evaluations reviewed in this chapter generally employ weak research designs to test programs focused on symptoms of community risk factors, rather than the basic risk factors themselves. This limits our ability to draw conclusions about what effects, if any, the evaluated programs really have. As Chapter Two explains, all evaluations are not created equal. Some of them provide far stronger evidence about cause and effect than others. The strong ones generally employ large samples, reliable measures of both program operations and their intended effects, and possible rival causes of those effects. The weaker ones, quite common in this chapter, may measure program content and crime, but do a very poor job of measuring other factors that may affect crime besides the program.

This chapter uses the scale of scientific methods scores presented in Chapter 2. On a scale of 1 to 5, each specific evaluation reviewed is ranked for its capacity to support strong conclusions about the effect of the program. This strength of evidence is often unrelated to costs, or even the theoretical strength of the program being tested. The massive Chicago gang prevention project of the early 1960s, for example, gathered detailed records on thousands of interactions between the gang workers and area youths. But because the program area was the unit of analysis, not those interactions, the actual sample size was only 4 areas, and the power to infer cause and effect was quite low. Any number of other factors could have caused crime in those areas to go up or down besides the presence or absence of the intensively measured gang prevention programs.

This problem poses a serious obstacle to advancing scientific knowledge about community-based crime prevention. Community risk factors can only be addressed and measured one community at a time. The cost of measuring some factors is very high. Multiplying that cost across a substantial sample of communities has long been deemed prohibitive by research funding agencies. Yet the cost of inner-city violence is also very high. The cost of more rigorous program research could be well justified if it led to more effective community-based prevention programs. In the absence of such investment to date, however, there is not a single large-sample randomized controlled trial in which the community is the unit of analysis and the outcome measure is serious crime.

A related problem of scientific method is the simultaneous application of more than one program to a community at a time. These combinations of treatments are usually premised on the rationale that the more programs, the better: comprehensively attacking many risk factors at once should increase the overall chances of successful crime prevention. In the words of one observer, the theory is that "only everything works." The problem is that even with successful results, a combination of programs makes it impossible as a matter of scientific method to isolate the active ingredients causing the success. It may be all of them in combination. Or it may be only one or two.

A third related issue is the choice of program elements. Many funding programs leave the choice of specific prevention programs up to local communities. Local assessment of specific community risk factors and local decisions about program content are a key part of many community-based strategies (Hawkins, et al, 1995). But from a

scientific standpoint, the variability in these combinations across communities allows an evaluation to test the effects of the general strategy, and not the specific program elements. Research designs in other fields have been used to systematically vary the program combinations, and determine across large samples which combinations are most effective, holding other factors constant through random assignment. This approach, or some variant of it, can be used in evaluating community programs, and may be implemented soon in England (Farrington, 1997).

There is no necessary tradeoff, as some have suggested, between comprehensive programs and scientific evaluations. While the operational and research problems in multi-community designs are clearly complex, they can be addressed with sufficient time and resources. As recent DOJ crime prevention policy has moved in the direction of comprehensive community programs, both the number of treatments and the number of communities have become increasingly critical aspects of the potential return on evaluation dollars. The scientific solution to the methodological limitations observed so far is larger sample sizes, with varying combinations of the treatments. The best argument in favor of this "big science" solution is the evidence that follows, and the extremely limited conclusions we can draw from the \$100 million or more (in current dollars) of private and public funds that it cost over the past three decades to conduct the studies examined below.

COMMUNITY MOBILIZATION

The most visible community-based crime prevention strategy in the latter Twentieth Century has been community mobilization. The definition of this term has varied widely, from the creation of formal community development organizations to the mobilization of resources from outside the community to help solve local problems like crime and unemployment. Hope's (1995) review of the evaluations of these programs finds virtually no evidence that the programs attempted to date have achieved an impact on crime. In some cases, as in New York City's Mobilization for Youth Project of the 1960s, that is due to the lack of crime impact evaluations. In other cases, it is due to a failure to implement successfully the programs selected by community leadership to a degree sufficient to test the theory of the program. Whether the approach could be successful under conditions other than those evaluated to date remains unknown.

The Eisenhower Foundation's support of nonprofit community organizations in ten low-income neighborhoods in the late 1980s offers one of the best evaluations available (Scientific Methods Score = 3; Lavrakas and Bennett, 1989, as cited in Hope, 1995: 39-40). Its most encouraging finding is that eight of the ten sites actually implemented programs chosen during the planning process. This stands in strong contrast to the police-generated neighborhood watch programs reviewed in Chapter Eight, for which the major problem in low-income areas has been successfully organizing block or apartment house meetings of neighborhood residents. The Eisenhower site programs that were implemented ranged from individual-level social service provision to attempts to change community social structure.

The evaluators concluded from the impact evaluations that there was "little evidence that the ...Program had documentable successes in achieving its major goals of crime reduction and improved quality of life."

These results may stem in part from what Hope (1995) calls the difference between "vertical" and "horizontal" strategies of community crime prevention. Horizontal strategies focus on aspects of community life and place accountability on community members to solve their own problems. Vertical solutions focus on the linkages between community life and decisions made at higher levels of power outside the community, from factory closings to bank redlining of mortgages. Recent scholarly analyses of community crime causes (e.g., Wilson, 1996) focus more on vertically determined dimensions of community life, while few prevention programs evaluated to date have drawn heavily on a vertical approach. Uses of vertical solutions to date have been relatively limited, such as seeking external assistance in street closings, assigning more police, and other city government decisions that leave untouched most of the risk factors cited above. But even local government decisions may make a difference.

In the NIJ-sponsored Hartford experiment in the early 1970s (Fowler and Mangione, 1986), the community mobilization of a resident organization was successful at street closing and obtaining increased police activity. Initial reductions in crime, however, were followed by increases in the third and fourth years of the program. This scientifically weak (Scientific Methods Score = 2) evaluation lacked a comparison area, which limits the interpretation of the target area crime trends. But it is of interest that in the two years after local police activity was reduced, resident mobilization rose to its highest program levels. But despite the peak level of community mobilization, robbery and burglary rose to their highest levels in the life of the project.

It may be that mobilization alone cannot bear down directly on crime, and that the "horizontal" theory of community crime prevention is not likely to succeed. Further experimentation with different "vertical" tactics may be needed to find out if community mobilization or other methods to affect decisions external to the local community can change such decisions in ways that cause local crime prevention.

COMMUNITY PREVENTION OF GANG VIOLENCE

The disconnection between causes and cures in community crime prevention is illustrated by our nation's approach to gang violence. Five recent reviews of this literature provide the evidence for this analysis (Klein, 1995; Spergel, 1995; Howell, 1995, forthcoming; Thornberry, forthcoming). Taken together, this research suggests four major conclusions:

1. Most government and private programs for gang prevention have been left unevaluated.
2. The few evaluated programs have either failed to decrease gang violence, or have actually increased it.
3. Gang prevention programs have ignored the most likely causes of the recent growth of gangs, the community structure of growing urban poverty ghettos.
4. Nonetheless, successful methods for preventing gang violence have been demonstrated in case studies, and could be subjected to controlled testing on a larger scale.

This section reviews the connection between gang membership and serious violent crime, the evidence on the causes of gang membership, and the evaluations of community-based programs for preventing gang violence. It concludes that while most evaluations have been negative, the scientific rigor of the studies has been weak. The case studies demonstrating success in preventing gang violence can be tested with much greater scientific rigor as possible national models. The high concentration of serious juvenile violence among gang members provides ample justification for large-scale research and development.

Gang Membership and Serious Crime

The basic question about gang prevention is whether it would have any impact on serious and violent crime. Success at gang prevention is only important to communities if eliminating gangs would reduce the number of serious crimes. The answer to that question has not been clear from the scientific evidence. Fortunately, a substantial investment in research by the U.S. Department of Justice Office of Justice Programs (OJP) has recently provided strong scientific evidence on the question. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) Study Group on Serious, Violent and Chronic Juvenile Offenders shared with the University of Maryland Crime Prevention Project its draft report, one chapter of which reviews this evidence (Thornberry, forthcoming). The chapter examines longitudinal data on the connection between gang membership and serious crime in two birth cohort studies. It breaks the question into two parts:

- o How much serious crime is committed by gang members?
- o Does gang membership make any difference in the harm caused by the people who join gangs, or would they have committed the same amount of serious crime even without joining a gang? That is, do gangs facilitate serious crime, or merely recruit serious criminals?

Thornberry reports that in Rochester, NY, one-third of a panel of adolescent males reported being a member of a gang at some point before the end of high school. That same one-third committed 90 percent of the serious crimes in the entire panel, including 80% of violent crimes and 83% of drug sales. Thornberry also summarizes similar results from the NIH Center for Substance Abuse Prevention (CSAP)-funded study of gang members in the

Seattle Social Development Project (Battin, Hill, Hawkins, Catalano, and Abbott, 1996, as cited in Thornberry, forthcoming). Gang members in Seattle comprised only 15% of the sample, but accounted for 85% of all robberies committed during grades 7 to 12, and 62% of all drug selling. Thornberry reports lower gang contributions for gang crime in Denver from Esbensen and Huizinga's (1993) panel data: with 6% of respondents reporting gang membership, gang members reported 35% of serious offenses and 42% of drug sales.

The hypothesis that gangs **cause** juveniles to commit more serious crimes than they would commit anyway receives a rigorous test in the OJJDP Rochester Youth Study. Thornberry et al (1993, as cited in Thornberry, forthcoming) report that gang members commit crimes against persons twice as often while they are active members of gangs than before and after active membership. Similar patterns were found for crimes in general and drug use, but not for property offenses. Thornberry (forthcoming) reports that similar patterns were observed in the Seattle CSAP project, except that involvement in drug sales in Seattle remained elevated even after gang membership ended (Hill, Hawkins, Catalano, Kosterman, Abbott and Edwards, 1996, as cited in Thornberry, forthcoming). More recent analyses of the Rochester data also show drug sales, as well as gun carrying, persisting at elevated rates even after gang membership ends (Lizotte et al, 1996).

Large sample, multiple interview, longitudinal self-reported offending studies are the strongest evidence possible on these questions. The studies reported here do not necessarily reflect the effects of gang membership in the highest-crime areas of the very large cities where serious juvenile violence is most concentrated. But the available evidence is clear enough to establish gang membership as a community risk factor appropriate for preventive programs. There is also a scientific basis for distinguishing gangs from drugs as a cause of violence, since Klein (1995) finds far more gang homicides without a drug link than with one.

Successful prevention of gang membership for substantial portions of adolescent males might reduce their rates of serious crime. Even among gang members, interventions to divert them from gang violence could prevent many crimes. The question then becomes how prevention or diversion can be accomplished at the community level of intervention. As a matter of science, the logical starting point is to attack the causes of gang membership.

Causes of Gang Membership

At the individual level of analysis, the causes of gang membership appear little different from the causes of delinquency in general (Thornberry, forthcoming). While the cumulation of disadvantages in life is a risk factor for both delinquency and gang membership, it is not clear why in the same community, some boys join gangs and others do not (Spergel, 1995).

At the community level of analysis, however, the patterns are somewhat clearer.

The key fact to be explained is why gangs have spread so rapidly--almost contagiously--over the past decade, from a few big cities to virtually all large and middle-sized cities and many smaller cities and towns. Klein (1995: 91) reports a 345% increase in the number of cities reporting violent gangs from 1961 (54 cities) to 1992 (766 cities). The 1995 National Youth Gang Survey found 2,000 jurisdictions reporting 23,000 gangs with some 665,000 members (Moore, 1996, in Howell, forthcoming). Within cities in which gangs have been well-established for decades, gang-related homicides have also risen dramatically, such as the 392% increase in Los Angeles County from 1982 to 1992 (Klein, 1995: 120). Klein (1995: 194) concludes that while the rise of homicides is partly driven by the growth in gun carrying, the growth of gangs themselves is strongly linked to the rapid growth of urban "underclass" areas.

Drawing heavily on William Julius Wilson's (1987) analysis of the new urban poverty ghettos, Klein isolates five factors: the loss of industrial jobs, out-migration of middle-class blacks, growing residential segregation of inner-city blacks, increasing failure of schools to prepare inner-city children for a service economy, and the consequent strains on family life of the declining ratio of "marriageable" (that is, employed) males to females of child-bearing years. Hagedorn (1988) applies this theory to the case study of Milwaukee, and finds a good fit with the facts: gang membership and violence rose as the Wilson model of concentrated urban poverty developed in that city. Huff's (1989) comparison of gangs in Columbus and Cleveland found much more rapid growth in Cleveland, where the Wilson model had rapidly accelerated, than in Columbus, where community factors had remained fairly static. Jackson (1991) found across a large sample of cities that two factors predicted whether they developed gangs, job opportunities and the proportion of the population ages 15 to 24.

Klein's own work with Fagan (reported at Klein, 1995: 204) finds that 1970 Census data on community characteristics at the city level predict gang emergence in the 1980s. Specifically, racial segregation and a low proportion of persons in the labor force in 1970, although not concentration of poverty in 1970, predicts the 1980s emergence of gangs. So does an interaction of the loss of manufacturing jobs and unemployment rates. Different patterns are evident, however, for blacks and Hispanics, with strong effects for the former but not the latter. Curry and Spergel (1992) also report black-Hispanic differences in causes of gang growth, with more emphasis on cultural factors for Hispanics and structural factors for blacks. These findings lead Klein (1995: 205) to this conclusion about the design of gang prevention programs: "at least some portion of the gang proliferation problem is reflective of larger social ills. Merely addressing gang problems through gang intervention, be it street work or suppression, won't have much effect."

Evaluations of Gang Prevention Programs

The impact evaluation literature is largely consistent with Klein's conclusion. Howell's (1995, forthcoming) review of these data for OJJDP includes nine studies, from which "nothing has been demonstrated through rigorous evaluation to be effective in

preventing or reducing serious and violent gang delinquency, [although] a number of promising strategies are available" (Howell, forthcoming, p. 21). Spergel's (1995: 256) independent review of the same evidence reaches the same conclusion: "traditional social intervention programs, whether agency-based, outreach or street work, or crisis intervention, have shown little effect or may even have worsened the youth gang problem."

Gang Membership Prevention. Three studies test a gang membership prevention program on a population of potential gang members. The first evaluation dates to the 1930s, when University of Chicago gang scholar Frederic Thrasher (1936, as cited in Howell, forthcoming) directed a four-year study of the "character-building" and recreation programs of a New York City Boys' Club. His conclusion sounds much like Klein's a half-century later: the program was unable to prevent gang membership due to family, school and poverty problems. "These influences for the most part were beyond the power of the Boys' Club to neutralize" (p. 78). The second study is a description of a grass-roots residential and nonresidential "sanctuary" from street life in Philadelphia (Woodson, 1981), without a comparison group. The House of Umoja also initiated "gang summits," so it is difficult to credit the city-wide drop from thirty-nine gang homicides in 1973 to one in 1977 to prevention alone.

The third prevention program (Thompson and Jason, 1988, as cited in Howell, forthcoming) consists of a gang prevention curriculum and afterschool recreational activities offered to eighth grade students suggests. The evaluation's conclusion that the program was successful is based on a difference of three more students who became gang members in the comparison group (4 out of 43) than in the experimental group (1 out of 74). The evaluation design also suffered substantial attrition between exposure to treatment and followup interview, as well as the common problem of school-based evaluations (see Chapter Five): the treatment was assigned at the level of the school, but evaluated at the level of the student. The design featured three pairs of schools, with one in each pair assigned to receive the program. The outcome data are not reported at the school level, but the base rate of gang membership in the short followup period renders most other aspects of the design less important. In sum, there is little empirical basis for promise in the Thompson and Jason (1988) evaluation of the gang prevention curriculum and afterschool program.

Gang Intervention. The programs for intervening with already active gangs and gang members are somewhat more rigorously evaluated. While the oldest and most influential of all gang intervention and prevention projects, the Chicago Area Project, has never been evaluated, its primary component has been evaluated several times. That component is the "detached worker," a trained youth counselor who spends most working hours on the streets with gang members. The role and function of these workers varies somewhat across projects, largely on a dimension of how much formal programming they organize, such as club meetings or outings to major league baseball games. Some detached workers also try to organize adults into voluntary associations, and to develop community-level capacity for leadership and problem-solving. The workers vary in the extent to which they focused on

gangs as groups or on gang members as individuals. The common core of their role is an attempt to redirect gang energy towards legitimate activity, including school and work, as well as to discourage crime.

Despite these variations on the theme, none of the evaluations of detached worker programs found any evidence of reduced crime. Klein (1971), in fact, found just the opposite in an African-American area of Los Angeles: the detached workers increased the level of crime, which declined after the program was terminated. His explanation for that result is that the detached workers enhanced group cohesion, which in turn increased the "productivity" of the gang with its major product, crime. The theoretical significance of that conclusion is enormous, given the implications for other gang programs that may also increase cohesion. Durkheim's basic principle that group solidarity is increased by external attack would apply, for example, to police efforts to lock up a gang. Such a struggle with authorities can provide glory and meaning to otherwise barren lives, and simply encourage more violence.

In a followup study, Klein (1995: 146)) applied the group cohesion theory in an explicit attempt to minimize it. The Ladino Hills program tested a strategy of working only with 100 Hispanic gang members as individuals, not with the gangs as a group. Detached workers in this evaluation encouraged gang members to drop out of the gang, which some of them did as long as the workers were around; gang arrests declined 35% during that period. Gang cohesion also remained low for a six month followup period after the program ended. Several years after the program ended, Klein reports, gang cohesion and crime returned to its baseline levels. He concludes (1995: 147) that gangs "cannot long be controlled by attacks on symptoms alone; community structure and capacity must also be targeted."

Limited evidence against the cohesion hypothesis, however, comes from a California Youth Authority program in Los Angeles in the mid-1970s (Torres, 1981, cited in Klein, 1995: 149). Over four years, cohesion-building efforts with seven Hispanic gangs, including sports activities, served as a basis for truce meetings and feud mediation. Homicides and intergang violence declined among the targeted gangs, but not between targeted gangs and other groups. Klein (1995: 149) is skeptical about the reliability of the police data on "gang" crimes, but concludes that "further research attention to such intensive efforts as took place in this CYA project certainly seem warranted."

Table 3-1
Findings from Gang Prevention and Intervention Evaluations
(Secondary Sources: Howell 1995, forthcoming; Klein, 1995)

	Scientific Rigor Score	Program Content	Program Effects
Gang Membership Prevention			
Thrasher 1936	?	NYC Boy's Club	No preventive effect
Woodson 1981	2	House of Umoja, Philadelphia	Gang Murders declined
Thompson & Jason 1988	2	12 Gang Prevention Classes; some afterschool options	Major attrition, small N joined gangs; 1 of 74 Experimentals, 4 of 43 Comparison
Gang Member Intervention			
Miller 1962	3	Goal: turn gangs into clubs, 7 detached workers, 205 boys	No effect on delinquency measures of targets
Gold & Mattick 1974 cited in Spergel 1995: 249	3	Detached Workers focused on gangs; community organization	No effect on area crime or gang crime; slight effect on educational goals
Bibb 1967	?	NYC Detached Workers with gangs	No effect on gang crime
Klein 1969	2	LA Group Guidance 5 detached workers 5 gangs, weekly meetings, program	Project increased delinquency; more program, more crime; crime reduced when program ended
Klein 1968, 1995:145-147	2	100 Ladino Hills gang members encouraged to leave gangs, 18 months	35% reduction in gang arrests from less gang cohesion; effect lost after 2 yrs

Torres 1981	2	Older gang leaders hired as consultants, truces and feud mediation	Homicides and intergang violence declined among target gangs, not other gangs
Spergel 1986	3	Crisis intervention & mediation by detached workers	Less serious crime for juveniles, more for adults, in target than control
Spergel 1995	3	Conflict mediation, job and school referrals, police and social workers	50% less serious violence for target gangs
Goldstein, Glick and Carthan (1994)	?	Anger Replacement training for gang members	Reductions in gang arrests

Most other evaluated gang programs had far less success than the CYA or Ladino Hills projects, even with the symptoms of community structure. It was not for lack of effort. The intensity of gang worker efforts is described in one summary of the six years of work of the Chicago Youth Development Project (CYDP), a privately-sponsored program combining detached gang workers with community organization (Carney, Mattick and Callaway, 1969: 15, as quoted in Klein, 1995:144):

Staff succeeded in finding 750 jobs for 490 young people; similarly, 950 school dropouts were returned to school 1,400 times. CYDP outreach workers made 1,250 appearances at police stations and courts on behalf of 800 youngsters. Finally CYDP workers made 2,700 follow-up visits to the homes of 2,000 juveniles who were arrested during the last thirty months of the project, in an effort to get them involved in one aspect or another of the project's programs. Despite this effort, the careful evaluation found that the youth unemployment rate remained unchanged, the school dropout rate increased somewhat, and the arrest rates of juveniles in CYDP areas increased over time.

A different and more recent strategy for using gang workers is crisis intervention and conflict mediation. A test of this approach by detached workers in a Puerto Rican area of Chicago had more encouraging, if, complex results (Spergel, 1986, as cited in Spergel, 1995: 255). While the program area had a slower rate of increase in serious gang crimes by **juveniles** than the comparison area, the program area also had a faster rate of increase in serious crimes by **adults**. Attempts to organize the target community were less successful than efforts to mediate juvenile gang conflicts to prevent violence. More recently, Spergel has found some evidence that a coordinated police-probation-detached worker program to monitor gang offenders on community supervision has slowed their rate of committing serious violence (Spergel and Grossman, 1995, as cited in Howell, forthcoming). Encouraging results from another conflict-oriented program have been reported for New York (Goldstein, Glick and Carthan, 1994, as cited in Howell, forthcoming). Using a cognitive skills approach called "Anger Replacement Training," the evaluators report decreases in arrests of gang members.

Perhaps the most encouraging findings about gangs come from Boston, where they have nothing to do with traditional gang prevention. Preliminary results of a gang-related project to reduce juvenile firearms crime are extremely encouraging (Kennedy, Piehl and Braga, 1996). An effort to deter gang-related gun violence by massive police response to any shootings is supported by probation officers who have the statutory authority to search probationers at will. The probation officers work with police to send out the word that any shootings will get anyone even tangentially involved into a lot of trouble. This approach has apparently given some gang members a convenient excuse to opt out of planned conflicts, much as the police crackdown on drunk driving in Australia has given barroom drinkers an excuse to refuse extra drinks (Homel, 1994). If the final results of this project confirm preliminary findings, it will be another example of substantially reduced gun crime without any structural changes in community conditions.

The Future of Gang Violence Prevention

While the results of available evaluations are generally negative, the number of careful field tests remains quite small. The average level of scientific rigor in the available evaluations is quite low. Taken together, **the studies show weak evidence of no effect.** None of the programs address the underlying community risk factors associated with the recent explosive growth in gang activity. Yet new models of gang violence prevention now under development at Harvard and the University of Chicago might well succeed in reducing gang violence without solving the structural problems of the inner-city. Combinations of police, probation officers and civilians who keep gangs under close surveillance may be successful at heading off planned conflicts leading to gun violence. Unplanned encounters of rival gangs leading to shootouts may be harder to prevent, but reduced gun carrying could accomplish that as well. Police-civilian teams checking known and convicted gang members for guns, with appropriate legal authority, could in theory reduce gun carrying and spontaneous shootings.

The enormous concentration of serious violence among gang members suggests the value of further research and development efforts to find effective prevention methods for gang violence. But the state of the scientific evidence suggests the risks of funding gang programs without careful evaluations, whether through block grants or discretionary programs. University of Southern California gang violence scholar Malcolm Klein (1995: 138) states the case clearly:

Consider California, more affected by street gangs than any other state is, by far...the state has 196 cities with street gangs, 60 in Los Angeles County alone. The state's Office of Criminal Justice Planning in fiscal year 1990-91 poured almost \$6 million into sixty projects under its Gang Violence Suppression Program. Included were school programs, street work programs, community mobilization, diversion alternatives, and a wide variety of criminal justice enforcement projects. Yet not a dollar went to an independent evaluation of the effectiveness of these projects. Sixty wasted opportunities to assess our efforts seems to be an inexcusable exercise in public irresponsibility.

The fact that Klein's own work demonstrated that a gang "prevention" program actually **increased** crime rather than reducing it lends special force to his conclusion. The theoretical implications of Klein's work on gang cohesion suggest that much of what police are doing--often supported by federal funds--to suppress gang violence may also be increasing rather than preventing that violence. The seriousness of gang violence provides even more reason, not less, for a high standard of scientific rigor in evaluating gang prevention. What evidence we have clearly shows that good intentions are not enough.

Both old and new strategies could be subjected to more rigorous evaluations. Despite the strength of Klein's findings, for example, they are based on quasi-experimental pre-post designs generally lacking control groups. A large scale test of gang worker strategies across a sample of 100 gangs, with 50 gangs randomly assigned to intervention,

might well produce different results. The Ladino Hills project Klein (1995:146) reports is actually quite encouraging; the program was a clear success at diverting gang members from gangs as long as the gang workers stayed on the job. Klein's emphasis on the project's failure to end gang activity in the area for up to two years after the gang workers were withdrawn seems to set an unrealistically high standard. Just because a maintenance therapy did not rise to the level of a permanent vaccine does not make it worthless. Rather, the evidence suggests that Klein has found a way to reduce gang membership. This is a promising finding that merits replication with a more rigorous research design.

New strategies for gang prevention should also be tested at much higher levels of scientific rigor. OJJDP is currently supporting the development and testing of comprehensive community gang prevention efforts, coordinating multiple local agencies and attempting to mobilize community involvement. NIJ is currently supporting firearms crime reduction efforts. Neither approach is currently undergoing a randomized controlled test (level 5) using communities, or gangs, as the unit of analysis. Indeed, it may well be premature to be doing so at this stage until the strategies are sufficiently well-developed. But a clear plan to develop a strategy that can be subjected to more rigorous testing could help move the nation more quickly to discovering effective methods for reducing gang violence.

One objection to this approach is that every city has a unique gang situation, and must design its own program (Klein, 1995: 154). The response to that objection is that most cities lack sufficient data to conduct rigorous evaluations: enough neighborhoods, enough gangs, enough gang violence to control for all the chance factors that can affect results. Limiting evaluations to one gang program or one city at a time would do little to increase available evidence about how to prevent gang crime. It is only by seeking out the commonalities of successful gang prevention programs across areas and types of gangs that the scientific basis for effective prevention can be advanced.

COMMUNITY-BASED MENTORING PROGRAMS

Community-based mentoring programs take a much broader focus on risk factors than gang prevention programs. Both the empirical evidence and theoretical linkages to community risk factors gives solid reason to support much more research and development on this strategy. While it does not have the gang programs' efficiency of focusing on the limited number of juveniles committing the most serious violence, mentoring offers the promise of effectiveness across a much broader population. Some members of that population could well become gang members or serious violent criminals. Mentoring could be a way to prevent that.

Theoretical Rationale for Mentoring

Why should mentoring of a larger at-risk population of pre- and early adolescents be

any more effective than detached social workers focused on gangs? Gang social workers, after all, are in effect mentors to gang members. But the general failure of detached workers may be due to their focus on older youths who are already active offenders. Many developmental theorists argue that ages 10 to 14 provide a more promising focus for intervention and prevention (Carnegie Council on Adolescent Development, 1995). The power of peer groups may not be as great in that age-range, and an intensive relationship with a conventional adult could be a powerful influence for youths on the cusp of delinquency.

A more powerful reason for the failure of detached workers with gangs may be insufficient dosage. Given their workloads, they may not have been able to spend enough time with their individual clients, irrespective of age, in order to become a strong role model. A more intense relationship, with "quantity time" of "quality time," between a "mainstream" male adult and a preadolescent or early adolescent boy may directly address several community risk factors for crime:

- o fatherless boys; 17 million children now in single parent homes, 25% of all youth and 50% of minority youth (Tierney, et al, 1995: 49)
- o lack of legitimate role models
- o insufficient "intergenerational closure" with adult influences counteracting peers (Wilson, 1996: 62)

Mentoring provides the highest dosage of adult-child interaction of any formal community-based program. Compared to street workers and recreation program supervisors, mentors can develop much stronger bonds with juveniles at risk. In theory, they can gain the power of "legitimacy" (Tyler, 1990) based on a pattern of respect and support the mentor establishes with the juvenile, so that the mentor's approval and attention becomes a valued resource. That resource then gives the juvenile a "stake in conformity" (Toby, 1957), something to lose if the juvenile gets into trouble with the law.

Mentoring programs described in available evaluations feature three to four meetings a month or more between mentor and child, with each meeting lasting at least for several hours. Community-based mentors see juveniles in a wide range of settings, including home, movies, professional sports, plays and concerts. They may talk frequently on the telephone, with mentees calling mentors as well as vice versa. In contrast to school-based mentoring programs (reviewed in Chapter 5) which generally operate with a heavier emphasis on academic issues and truancy, community-based mentors tend to be involved in more domains of the child's life. They may also provide more resources in the form of entertainment outings. Mentors may be paid or unpaid, college students or adults. All of them receive some sort of training, although the infrastructure supporting mentoring relationships varies. Adult volunteers in the oldest formal mentoring program, the 90-plus year-old Big Brothers and Big Sisters of America (BB/BSA), for example, are subjected to

extensive background examination to screen out potential child molesters.

Results of Community Mentoring Evaluations

Careful examination of community-based mentoring evaluations supports a conclusion that they are a promising approach to preventing crime risk factors, notably drug use. While most of the evaluations show no effect, the most rigorous modern evaluation shows a strong effect at reducing drug use, and clear effects at reducing alcohol use and "hitting" among at-risk children. The short-term measurement of those beneficial effects, however, must stand in the shadow of much less encouraging results from a thirty-year followup of an equally rigorous Depression-era mentoring test, the privately-funded Cambridge-Somerville experiment.

Controlled Experiments. The first controlled test of mentoring began in 1937, when recent college graduates were hired and trained to provide an average of two visits a month to the experimental half of a sample of 650 at-risk boys under age 12 at the program's outset.³ The paid social worker mentors met with their clients at home, in the street, or at project headquarters. They provided academic tutoring, trips to concerts and sports events, and general emotional support for the boys. The program also provided the boys' families with help for medical and employment problems, and sent the treatment group boys to summer camp. By 1942, 253 of the original 325 treatment group boys were still in the program, when it was ended so the counselors could join the armed forces.

The results of this intensive mentoring showed no difference between treatment and control groups in criminal records, either in 1942 (Powers and Witmer, 1972) or in 1975-76 (McCord, 1978). The longterm followup, however, did show significantly higher levels of diagnosed alcoholism, serious mental illness, and stress-related physical health problems. A higher level of unfavorable life outcomes, although not specifically greater crime, among the treatment group seems clear. What is less clear is the meaning of the results for the value of mentoring programs today.

Three theories compete to explain these results. One is that mentoring simply backfires, somehow creating an artificial source of support that makes it harder for mentored boys to adjust as adults. A more plausible theory is that the abrupt departure of these long-term counselors from the boys' lives was as damaging emotionally to the boys as a divorce or other loss of parental involvement, compounded in many cases by the boys' previous loss of their own natural fathers' support. A third theory is that the difference in diagnosed mental health problems is only an artifact of the treatment group's greater exposure to professional and medical services as part of the treatment content. Under this

³ Whether this program is properly characterized as a mentoring program or something else is an issue debated within the University of Maryland team, one that illustrates the difficulty of characterizing multi-dimensional programs on the basis of any one dimension.

theory, the treatment boys had no greater rate of personal problems, but when they had problems they were simply more likely to seek professional help of the kind the program had taught them to seek.

The fundamental principle of science here is that one experiment alone, no matter how rigorous, cannot provide a "definitive" test of any hypothesis. Social experiments in particular require replication to determine their generalizability to other times and places. A three-decade followup is an excellent basis for drawing conclusions about the lifetime effects of a treatment, but it has a substantial drawback for policy analysis: by the time the results are in, the world has changed so much that the results may no longer be valid. The modern social conditions of inner-city poverty and segregation are so different from the context of the Cambridge-Somerville experiment that it is not clear that the identical program would produce similar results.

If three decades are too long, one year is probably too short. Unfortunately, that is all we have in our modern controlled experiment in community-based mentoring for pre- and early adolescents (Tierney and Grossman with Resch, 1995). The virtues of this experiment, however, are many, including the substantial risk factors in the sample. The 959 eligible applicants for the Big Brothers/Big Sisters program in eight cities came from homes in which 40% of the parents were divorced or separated, 15% had suffered a death of a parent, 40% had a family history of substance abuse, and 28% had a history of domestic violence. The children themselves, of whom 60% were minorities, 40% girls, and all aged 10-14, included 27% who had been abused as children. As Chapter Four reports, child abuse substantially increases the risk of criminality in later life.

How much the Big Brothers/Big Sisters program reduces criminality later in life is not clear. What is clear from this tightly randomized experiment is that there were substantial benefits in one year (average) treatment. After spending around 12 hours monthly with their volunteer adult mentors, the treatment group children had 45% less reported onset of drug abuse than the control group children, who had been put on the waiting list.⁴ They also had 27% less onset of alcohol use, and 32% less frequency of hitting someone. The program also reduced truancy: treatment group children skipped 52% fewer days of school and 37% fewer classes on days they were in school.

These results were achieved at a very modest cost. Since the mentors volunteer their time, the only cost is the infrastructure needed to recruit, screen, train and properly "match" the mentors to children for successful long-term relationships. The cost is estimated at about \$1,000 per match (Tierney and Grossman, with Resch, 1995: 52). While

⁴ Control groups and randomized experiments are generally far more possible ethically than many public officials are willing to concede, giving the scarcity of resources. Waiting lists are an excellent opportunity for controlled experiments. In this case, the control group males waited no longer than the applicants on the waiting list.

Table 3-2

Community-Based Mentoring Evaluations

Primary Source (secondary)	Scientific Methods Score	Program Content	Program Effects
McCord 1978, 1992 Powers and Witmer 1972	5	2 visits monthly by paid male counselors for 5.5 years with 253 At-risk Boys under 12 in 1937-42; WW2 end	No effect on criminal record; treatment group did worse on diagnosed mental health
Tierney et al 1995	5	Big Brothers & Sisters, 1 year for 10- 14 yr.-olds, 60% minority & 27% abused; 3 hrs wkly	46% reduction in drug use onset, 32% reduction in hitting people, relative to controls
Green 1980 (Howell 1995)	4	Big Brothers for fatherless white boys 1/2 day weekly for 6 months	No effects on disruptive class behavior; no measures of drug use
Goodman 1972 (Howell 1995)	2	College Student Mentors of 10-11 yr- old boys 6 hrs wkly over 2 years	high control group attrition; program effects on crime unknown
Dicken, Bryson and Kass 1977 (Howell 1995)	3	College Student mentors for 6-13 yr.- olds, 6 hrs wkly, 4 months	no difference in teacher-rated behavior of mentees
Fo and O'Donnell 1974 (Howell 1995)	5	12 weeks of paid community mentors with at-risk 11 to 17 year olds; N = 26	Truancy reduced significantly under some conditions
Fo and O'Donnell 1975 (Howell 1995)	5	1 year of paid community mentors meeting weekly with at-risk 10-17 yr-olds	Lower recidivism for treatment groups with priors, higher without

the full crime prevention benefits of that cost cannot be specified without a longer-term followup study, the short-term benefits alone might justify federal support of this apparently underfunded program. At a price of \$1,000 per year of drug abuse prevented, the taxpayer would be well ahead spending money on this program instead.

Two other randomized experiments in paid "Buddy System" mentoring conducted in Hawaii were published in the early 1970s. The ages of the at-risk youth ranged from 11 to 17, while the ages of the paid mentors ranged from 17 to 65. The first experiment (Fo and O'Donnell, 1974, as cited in Howell, 1995: 91) lasted only 12 weeks, during which it randomly assigned 26 subjects into four treatment groups (an average of 6 per group). This small experiment used an elaborate theoretical model, in which treatment groups varied on several dimensions. The dimensions included the conditions of mentor approval for the mentees, dichotomized as contingent, or not, on appropriate behavior by the mentees. A third treatment group was paid \$10 a month on the same contingent basis. The results showed that truancy declined for the subjects receiving contingent approval, but not for those receiving unconditional approval.

A larger experiment by the same authors abandoned the theoretical distinctions, comparing crime rates between randomly assigned 10-17 year olds receiving mentoring or not (Fo and O'Donnell, 1975, as cited in Howell, 1995: 92). The one-year experiment found that treatment backfired among those with no prior record; those in the experimental group had more offenses during treatment than control group youths who also had no prior record in the baseline period. Among youth who had prior records at the outset of the experiment, however, the results were the opposite: mentees had less recidivism than the control group. The possible reasons for this difference were not reported.

Non-Randomized Evaluations. The other community-based mentoring studies offer little scientific evidence for policy purposes. The Green (1980, as cited in Howell, 1995: 92) evaluation of a Big Brothers' program in Nassau County, for example, lacks any outcome measure of drug abuse, violence or crime. Green does find no difference in disruptive classroom behavior, but so did the Tierney and Grossman with Resch (1995) experiment. The non-randomized design and 6 month followup period also limit its value.

None of the remaining tests are strong enough to contradict the positive effects found in the recent test of Big Brothers/Big Sisters. The Goodman (1972, as cited in Howell, 1995: 90) two-year test of paid mentors in Berkeley (CA) showed some evidence of worse school behavior among mentored at-risk boys than among the controls. Substantial attrition in the control group only, however, made the comparison difficult to interpret. A nonrandom test of a similar approach using unpaid college students for a semester found no differences in teacher ratings of behavior (Dicken, Bryson and Kass, 1977, as cited in Howell, 1995: 91). All of these negative results from what were essentially "start-up" programs may be due to factors that are not present in the standardized, long-practiced methods of the national Big Brothers/Big Sisters program.

The Future of Community-Based Mentoring

The major question about mentoring remains the meaning of the Cambridge-Somerville experiment for contemporary public policy. The answer to that question is unlikely to come from further analysis of that experiment, but from its replication under modern conditions. The Big Brothers/Big Sisters experiment (Tierney and Grossman with Resch, 1995) is an excellent start in that direction, and would be even more valuable if followed by many years of followup data collection. Its promising results, however, suggest the value of a larger test, one that incorporates the diagnosis of community risk factors, as suggested in the conclusions of this chapter.

Based solely on the research available at present, there seems to be sufficient basis to reach somewhat different conclusions than those reached by one OJP publication prepared prior to the publication of the Tierney and Grossman with Resch (1995) experiment, which substantially alters the weight of the evidence. The OJJDP Guide for Implementing the Comprehensive Strategy for Serious, Violent and Chronic Offenders (Howell, 1995: 128) suggests that "mentoring relationships that are noncontingent and uncritically supportive" are "not effective," but that "mentoring relationships that include behavior management techniques" are "potentially promising." The Big Brothers/Big Sisters program reports no contingency policy for mentor approval of mentees. Its success at reducing drug use onset would thus seem to falsify the "contingent approval" hypothesis. The small sample size (N =26) of the one finding consistent with that hypothesis makes the much larger recent study more compelling evidence (Fo and O'Donnell, 1974).

The most important conclusion from this research restates the conclusion of the gang prevention evaluations. Even with the encouraging findings from the most recent controlled test of community mentoring, there is too little information for adequate policymaking. The priority is for more research, not more unevaluated programs. The danger of doing harm is far too great to promote and fund mentoring on a broad scale without carefully controlled evaluations. No such evaluations, to our knowledge, are presently on the drawing boards. They could readily be included, however, as part of a broader test of a comprehensive interventions package in high-crime areas. While the community context of mentoring experiments under those conditions would be unique, the addition of other programs addressing community risk factors could well enhance the potential for crime prevention will adding to scientific knowledge.

COMMUNITY-BASED RECREATION PROGRAMS

The hypothesis that recreation can prevent crime has become one of the most acrimonious in the history of crime policy. More than any other issue, the debate reflects the inappropriate definition of prevention discussed in Chapter 2. What is most revealing about the debate, however, is the virtual indifference it has displayed to empirical evidence. Rather than arguing on theoretical grounds alone, it would seem more valuable to test the

hypothesis scientifically. Chapter Five presents evidence that school-based programs have been tested and found ineffective at preventing crime and delinquency. This section presents more limited evidence on community-based recreation centers, where the evidence is thinner but marginally more promising.

An OJJDP publication (Howell, 1995: 95) provides a clear statement of the recreation hypothesis:

Afterschool recreation programs can address the risk factors of alienation and association with delinquent and violent peers. Protective factors may include opportunities for involvement with prosocial youth and adults, skills for leisure activities, and bonding to prosocial others.

An equally plausible negative hypothesis can be suggested on theoretical grounds. In a neighborhood plagued by inter-gang rivalries and everyday anger (Bernard, 1990), after-school recreation creates opportunities for victims and offenders to intersect in time and space (Cohen and Felson, 1979), creating conflicts and potential for violence. One Philadelphia nightclub shooting in the early 1980s, for example, was generated by a fight that began on a recreation center basketball court. A middle ground hypothesis is that the effects of after-school recreation may vary substantially by neighborhood context and how the recreation center is run.

Results of Recreation Evaluations

The scientific evidence on these hypotheses is currently quite limited. What evidence there is all positive, supporting the proponents of recreation programs. While the scientific rigor of the three available evaluations is modest, it shows fairly strong effects, two on crime and one on drugs. Two are based on Boys' and Girls' Clubs (BGC), and two are in public housing.

Table 3-3
After-School Recreation Programs

Primary Source (Secondary source)	Scientific Methods Score	Program Content	Program Effects
Jones and Offord 1989 (Howell 1995: 95)	3	Canadian Public Housing Project children 5 to 15 offered intensive recreation, 3 years	75% reduction in juvenile arrests for experimental, 67% increase for control location
Schinke, Orlandi and Cole 1992	4	3 groups of 5 public housing projects each, 1 group Boys/Girls Club (BGC), 1 BCG plus drug prevention, 1 control no BGC	Recreation centers with drug prevention had lowest drug use; vandalized housing units down 25% in drug prevention sites
Brown and Dodson 1959 (Howell 1995: 95)	3	Boys' Club area compared to 2 comparison areas, 9 years	Program area delinquency declined after two years, comparison rose

The test in a Canadian public housing project offers the strongest evidence. Over 32 months, the low-income children ages 5 to 15 were provided an intensive after-school program in sports, music dancing, and scouting. A comparison public housing project had only minimal city services. The majority of age-eligible children in the test site participated in the recreation program. Compared to a baseline period of two years prior to the program, arrests of juveniles in the program site declined 75 percent. In the same time period, arrests of juvenile in the comparison site rose 67%. Sixteen months after the program ended the effect had worn off, providing further evidence of a program effect (Jones and Offord 1989, as cited in Howell, 1995:95).

The American public housing test covered three groups of five housing projects each. One group already had a traditional BGC program operating in the community center. A second group received newly established BGC programs, supplemented by the SMART Moves (Self-Management and Resistance Training) substance abuse prevention program aimed at parents as well as children. A third group of three projects had no BGC and remained that way as a control group. Observational and police data indicated a decline in drug use in the new BGC/SMART Moves sites. Archival records showed that vandalized housing units dropped from 8% to 6% of total units in the new BGC sites, while rising from 8% to 9% in the controls and remaining unchanged in the existing BGC sites (Schinke, Orlandi and Cole, 1989).

A nine-year, 1950s study examined juvenile delinquency in a Louisville Kentucky area served by a Boys' Club (Brown and Dodson, 1959). The club included both traditional activities at the building and a summer camp program. The study found declining juvenile delinquency relative to two comparison areas without a Club. The first two years after the Club began operation, however, showed similar trends in delinquency in the program and comparison areas. While the prevention effect could plausibly have taken several years to become evidence, the lack of significance tests and other checks on validity limit the value of this study.

The Past and Future of Recreation Programs

Recreation programs merit further research and development for their potential crime prevention benefits, if only because they continue to draw Congressional support (e.g., Washington POST, January 16, 1997, p. A4). This conclusion is based not just on the three available impact evaluations, but on the long history of such programs in mainstream American life. The widespread availability of such programs in low-crime areas is another structural difference between suburban and inner-city communities, one that may contribute to the latter's higher crime rates.

The danger of violent conflicts being generated by club activities is just as open a question as the potential benefits of the programs. Careful research is needed to assess the net frequency of such conflicts with and without recreation, since shootouts can start off the basketball courts as well as on them. The potential prevention benefits from such programs

may well exceed the benefits of prison, perhaps at much lower cost. But we will never know unless we invest in careful evaluation research. More funding of operations alone will leave the policy decision vulnerable to ideological and symbolic politics, rather than a rational decision on the merits of reliable evidence.

REMOVING CRIMINOGENIC COMMODITIES

Perhaps the most immediate proximate contributing cause to many criminal events is a "criminogenic substance" (Cook and Moore, 1995). Guns, drugs, alcohol and cash, in the right circumstances, can all provide the additional, if not sufficient, cause which helps make a crime happen. That does not mean, however, that these substances will always be in the right circumstances, even when they are available in the community. Guns, for example, may not do much harm if they are kept locked in a safe, even though the potential for theft of the guns may make them a potential cause of a shooting on the street. Similarly, the context and use of alcohol varies widely, and is only criminogenic in some settings.

One approach to community crime prevention is to limit access to criminogenic substances. Community groups often lobby against the renewal of tavern liquor licenses, for example, on the grounds that the alcohol access increases the rates of robbery and assault in the community. Many cities are increasingly concerned about 24-hour bank cash-dispensing machines, with increasing regulatory control of their locations and security measures (Sherman, 1995). Low-income communities have possibly had fewer robberies and thefts since direct bank deposit of welfare and Social Security checks became common a decade ago.

These ideas are generally theoretically sound, given the prevailing theory of criminal events (Felson, 1994). Few of them have been evaluated. One specific approach that has been evaluated, gun buyback programs, suggests that there can be a major gap between theory and practice.

Gun buyback programs are based on two hypotheses. One is that the more guns in a community, the more gun violence there is. There is substantial evidence to support that claim (Reiss and Roth, 1993). The second hypothesis, however, is not supported by the evidence. That hypothesis is that offering cash for guns in a city will reduce the number of incidents in which guns are used in crime in that city. Four evaluations reviewed in Figure 4 show no effects of gun buyback programs on guns. There are several reasons why buyback programs may fail to reduce gun violence:

- o they often attract guns from areas far from the program city
- o they may attract guns that are kept locked up at home, rather than being carried on the street

o potential gun offenders may use the cash from the buyback program to buy a new and potentially more lethal firearm; the buyback cash value for their old gun may exceed market value substantially.

The enormous expense of these programs is instructive. When St. Louis invested \$250,000 in gun buybacks in 1994, the same funds could have been used to match 250 children with Big Brothers/Big Sisters. Those 250 children would then have enjoyed about half the risk of becoming drug users, at least for the first year (Tierney and Grossman with Resch, 1995). But the opportunity cost of the programs never entered into the debate.

The scientific rigor of the buyback evaluations is not great. They can be summarized as providing **moderate evidence of no effect**. They fail to show effects on gun crimes relative to a comparison of trends in the same types of crimes committed without guns. Given their high cost and weak theoretical rationale, however, there seems little reason to invest in further testing of the idea.

Table 3-4
Gun Buyback Evaluations

Source	Scientific Rigor Score	Program Content	Program Effects
Rosenfeld 1995	3	1991 Gun Buyback in St. Louis of 7,500 guns	No reduction in homicides or gun assaults relative to same offenses, no guns
Rosenfeld 1995	3	1994 Gun Buyback in St. Louis of 1200 guns	No reduction in homicide or gun assaults relative to same offenses, no guns
Callahan et al 1995	3	1992 Seattle Gun Buyback	No effect on crime reports or medical records of gun injuries

CONCLUSIONS

This chapter has shown that there is a substantial disconnection between what is known about community causes of serious violence and what this nation is doing about those causes. The scientific evidence that communities matter is strong. The evidence that serious crime is concentrated in a very small number of communities is even stronger. But the link between those facts and the design of prevention programs is very thin indeed. Instead, a National Academy of Sciences report concludes there is evidence that federal and local transportation and housing policies over the past half-century have substantially contributed to the causation of serious crime, especially in the hypersegregated inner cities where over half of all homicides occur.

Despite the past gap between causation and prevention, there are many as-yet unevaluated new efforts on the horizon attempting to bridge that gap. There is also promising evidence that some programs can be successful without addressing the root causes diagnosis of causation. Thus the prospects for progress in community-based prevention may be stronger than the current evaluation record suggests.

By the criteria used in this report, there are no community based programs of "proven effectiveness" by scientific standards to show with reasonable certainty that they "work" in certain kinds of settings. There are programs for which we can conclude the evidence shows with reasonable certainty that they do not work, at least in the settings where they have been evaluated. But even these programs might be found effective if varied in significant ways and rigorously evaluated. Moreover, there is both empirical evidence and theoretical reason to conclude that some programs are promising enough to merit further replication and evaluation.

What's Promising

- o **Gang violence prevention** focused on reducing gang cohesion, but not increasing it
- o **Volunteer mentoring** of 10 to 14 year-olds by Big Brothers/Big Sisters is promising for the reduction of substance abuse, but not delinquency

What's Doesn't Work

- o **Community mobilization** against crime in high-crime inner-city poverty areas
- o **Gun buyback** programs operated without geographic limitations on gun sources

THE EFFECTIVENESS OF DOJ PROGRAMS

These findings offer some answers to the Congressional question about the effectiveness of DOJ crime prevention programs. Perhaps most important is the scientific

support for the growing emphasis on comprehensive programs for high crime communities found throughout the Office of Justice Programs (OJP). With the advent of the Enterprise Zone/Empowerment Communities (EZ/EC) initiative, the emphasis on comprehensive risk factor strategies is spreading to the entire federal executive branch. The scientific evidence supports this approach, especially to the extent that it actually concentrates on the specific neighborhoods in which serious crime is most heavily concentrated--not just the cities in which those neighborhoods are located. Because this review finds no community-based programs of scientifically proven effectiveness to employ in those high-crime communities, however, there is a critical need for further research and development to help focus that funding more effectively. And because the statutory plan allows states to expend DOJ funds in communities with moderate to low rates of serious youth violence and risk factors for crime and delinquency, the expenditure of the funds is not yet optimal for discovering programs of proven effectiveness in those areas.

Several DOJ funding programs provide support for community-based local prevention programs. The major funding areas are Byrne Grants, Weed and Seed, Local Law Enforcement Block Grants, and the Title V Delinquency Prevention Grants. Most important, however, may be the DOJ funding for rigorous program evaluations of community-based prevention.

Byrne Grants

The Byrne Formula Grant program (as distinct from discretionary grants--see Chapter One) awarded \$1.8 billion through the states and territories from 1989 through 1994 (Dunworth, et al, 1997: 5). Community crime prevention, property crime prevention, and public housing are three of the twenty-one original (now 26) "Purpose Areas" for the program. Grants funded under these purpose areas could generally fall in the institutional setting addressed by this chapter. Together the three purpose areas received approximately \$68 million, or less than four percent of the total funding. Drug treatment is a fourth Purpose Area operating at the community level, receiving \$107 million in those years or 6 percent of total formula grants.

As noted in Chapter One, the broad diversity of programs funded and general absence of scientifically rigorous impact evaluations makes it impossible to assess the effectiveness of the Byrne funding stream as a single policy. Even the specific Byrne Purpose Areas cover a broad range of local programs. The scientific evidence reviewed in this chapter, however, strongly supports the statutory language calling for "strategic plans to target resources on geographic and substantive areas of greatest need" (Dunworth, et al, 1997: 3). The key question raised by this chapter is the best criteria for selecting the areas of greatest need. A related question is the most appropriate definition of "area." Absent a clear focus on the geographic areas with the most serious crime, community-based programs offer little scientific basis for claims of effectiveness at preventing such crime.

The evidence suggests that community-based Byrne grants may be most effective if concentrated on the small number of census tracts (often contiguous) where the majority of homicides in each state are clustered. The scientific evidence on the geographic distribution of homicides shows strong concentrations within high risk-factor census tracts. While a decade ago it would have been difficult for many states to analyze homicide data statewide by census tract, recent advances in microcomputers and computerized crime mapping makes such analysis feasible. Not every high homicide area may be appropriate for Byrne funding, given the difficulties of implementing community-based programs. But a statutory plan to focus a substantial percentage--perhaps fifty percent or more--of community-based Byrne Grant programming within such communities could speed the process of discovering what works. This would be especially likely if coupled with a national plan for testing community-based strategies across large samples of communities (see below).

The issue of concentration helps to interpret the evidence on **community mobilization**. That evidence shows that, by itself, mobilization is ineffective against serious crime in low-income communities. But it is far too early to close the door on mobilization as a possible necessary condition for other strategies. Many questions remain about whether mobilization can enhance a wide range of other specific efforts to attack serious crime, such as helping police reduce illegal gun carrying, reducing the availability of drugs and alcohol, and divert youth from gangs. Those questions, again, can only be answered by large sample community level studies as recommended below. In the absence of such programming for the sake of discovering what works, however, community mobilization funding would be of doubtful effectiveness.

Concentration of funds on high-crime communities would also make it possible to evaluate programs like drug treatment in a community-based way. Rather than examining the effects of drug treatment on individual-level crime rates, a community-level concentration of drug treatment could measure the community crime prevention effects of substantial increases in local treatment slots. The individual-level evidence we do have on drug treatment (see Kinlock, 1991), however, is certainly supportive of the effectiveness of Byrne funding spent on that Purpose Area.

Local Law Enforcement Block Grants

This formula grant program newly established in 1996 is also more focused on high-crime communities than other federal funding of local crime prevention. Most of the \$404 million in 1996 funds were allocated on the basis of each local police agency's level of reported Part I violent crimes. The statutory distribution plan clearly places greater resources in the cities with the most serious problems of violence and youth violence. It does not, however, require that the funding be concentrated within those cities in the areas of greatest risk.

Like the Byrne Program, Local Law Enforcement Block Grants (LLEBG) could be

focused more precisely on census tracts with highest homicide rates. And like the Byrne grants, LLEBGs have awarded substantial support for community mobilization. The 1996 amount was \$33 million, about nine percent of program funding. The comments above about further funding of community mobilization programs under Byrne apply to LLEBG as well; more investment in discovering what works seems justified, while unevaluated funding is likely to be ineffective at either preventing crime or increasing scientific knowledge about prevention.

Weed and Seed

Since 1991, the Weed and Seed program (see Chapter One) has been the most theoretically appropriate federal funding program for dealing with concentrated inner-city violence. Based upon the available DOJ publications, Weed and Seed funding offers the clearest focus on the census tracts with very high homicide rates; the initial program area in Kansas City had a rate of 180 per 100,000, or twenty times the national average. As the first of many comprehensive inner-city programs developed in recent years by OJP, Weed and Seed also offers the best evidence on the challenges of implementing and evaluating comprehensive programs, especially those in which DOJ becomes the lead agency in mobilizing resources from other federal departments at a micro-local level.

Weed and Seed's rationale for preventing serious crime is a high concentration of resources addressing a high concentration of risk factors in a small geographic area. The basic structure of this approach apparently differs from the majority of DOJ funding, which by statute cannot be focused upon the highest-crime communities. Given enough evaluation evidence for programs of proven effectiveness in such places, there could be a strong rationale for channeling the majority of DOJ crime prevention funding in ways similar to Weed and Seed. The challenge for Weed and Seed is therefore not just to prevent crime in the target communities, but to do so in a way that allows scientific evidence to accumulate about program effectiveness. The initial history of the program in that regard is instructive.

The initial Weed and Seed target area in Kansas City was accompanied by an NIJ evaluation grant that was almost equal to the amount of the program funding. That evaluation found a 49 percent reduction in gun crime and a statistically significant reduction in homicide associated with a single element of the program that fell outside the community-based institutional setting of this chapter (see Chapter Eight): directed police patrols at computer-located "hot spots" of gun crime (Moore, 1980). These patrols produced a 65 percent increase in gun seizures not found in the comparison area, where gun crime remained stable (Shaw, 1994; Sherman, Shaw and Rogan, 1995). The single element could be evaluated because none of the other elements had been implemented at that time. Had there been other elements implemented, it would have been scientifically impossible to isolate the effects of this element. Fortunately, the delay in the other program elements allowed the evaluation to discover an apparent effect with important implications.

Subsequent Weed and Seed sites did not have such intensive evaluations. The 50-50

ratio of evaluation to program dollars was tipped overwhelmingly in favor of program dollars. In the five years since the subsequent site funding was awarded, no impact evaluation has been completed. A process evaluation published by NIJ (Roehl, et al, 1996) illuminated the complexity of the program, which has now attracted substantial state and private funding in some sites. A second multi-site evaluation is now in progress, which is slated to produce site-specific impact evaluations at a Scientific Methods Score of either 2 or 3. The ability of that retrospective design to isolate program elements in relation to crime prevention will be difficult given the problem of multiple treatments (Cook and Campbell, 1979). Thus as the program currently stands, there is good scientific theory but no scientific data to show the effectiveness of the program.

The most challenging theoretical element for any inner-city crime prevention program is raising the community rate of adult labor force participation (Wilson, 1996). Chapter Six discusses the evidence on that point in detail. Labor force programs have suffered from a lack of focus on the Weed and Seed strategy, scattering resources across individuals spread out over many disparate communities. More recent private and public efforts to change community labor markets, rather than personal labor skills, fit right into Weed and Seed (see Bloom, 1996). They can easily become an integral part of its multi-risk factor reduction strategy, coupling high enforcement with greater opportunity.

Comprehensive Communities Program

Similar in conception to Weed and Seed, the Comprehensive Communities Program (CCP) is an effort to integrate social programs and policing, public and private organizations to control crime and improve the quality of life. The major difference is a lower funding level (see Chapter One) and a less clear-cut focus on addressing the highest-crime, highest risk factor areas. CCP is more flexible about specific priorities set by city-wide leadership for specific programs and areas in which to operate them. The scientific evidence is thus less helpful in assessing such a program, given its greater variability. An intensively measured level 2 process and impact evaluation is currently under way (Rocheleau, et al, 1996), but there is no well-controlled test of its crime prevention effectiveness in progress. To the extent that some sites rely on gang programs that are of uncertain safety and effectiveness, as this chapter has shown, controlled tests of those specific program elements would be a high priority.

Title V Community Prevention Grants Program

Since 1992, this program has assisted local juvenile justice agencies to collaborate with other youth-serving agencies to develop an integrated system of services designed to prevent delinquency (see Chapter One). A major prevention component of this strategy is based on the Communities That Care model (CTC; Hawkins, Catalano, & associates, 1992). Consistent with the scientific evidence of concentrated risk factors, but not with the micro-local focus discussed in this chapter, the CTC model recommends a flexible plan for reducing risk factors. The plan is for local jurisdictions to identify risk factors known to be

associated with delinquent behavior, to identify protective factors that buffer the effects of the identified risk factors operating within the communities, and to target program interventions on those factors. Like Weed and Seed, this program has a firm foundation in indirect empirical evidence and theoretical support. What it lacks to date is scientifically rigorous crime prevention impact evaluations.

The Title V program is implemented in two phases. During phase one, the assessment and planning phase, communities (defined here as entire jurisdictions, not neighborhoods) interested in participating in the Title V program must form a local prevention policy board and conduct an assessment to identify and prioritize the risk factors operating in their community. On the basis of this assessment, the applicant community then must develop a specific, comprehensive 3-year delinquency prevention plan. This plan serves as the basis for the community's application to the state's juvenile justice advisory group for Title V funding. Phase two of the process involves the implementation, monitoring, and evaluation of the programs and services. A 1996 survey administered by GAO showed that most of the 277 local projects supported by this program appeared to be designed in accord with the CTC model.⁵ For example, 78% reported addressing multiple risk factors in three or more substantive problem areas, and about 90% reported that they used two or more strategies identified in the CTC materials as "promising." Common prevention activities include parent training in effective techniques of conflict resolution and after-school programs.

The CTC model recommends local monitoring of changes in risk and protective factors at the community (city or county) level, but that will yield limited insights on crime prevention effectiveness. A national evaluation of Title V is being planned, but its scientific strength will be limited in the absence of random assignment of funding, or at least of different prevention strategies, to some communities and not others (Farrington, 1997). The scientific possibilities for comparing two different approaches consistently applied within two equivalent groups of communities, especially at the neighborhood level, would appear to be quite strong (Boruch, 1996). But whether it will happen depends in large part on the future of the issues and recommendations presented in Chapter 10.

Based on our review of the evaluations of the programs in the OJJDP "menu" for Title V (Howell, 1995) in Chapters 2,3,4,7 and 8, we can make a limited assessment of the potential effectiveness of this crime prevention program. The framework provided for the Title V incentive grants focuses local jurisdictions on selecting prevention strategies that have some basis in research. It is possible, however, that the array of "promising" activities allowed under the model is too broad, encompassing some ineffective strategies along with the more effective ones. The GAO report describes activities undertaken with Title V funds in six jurisdictions. These descriptions are too general to support a judgement of the

⁵ This section is based largely on a recent (August, 1996) G.A.O. report entitled "Status of Delinquency Prevention Program and Description of Local Projects."

delinquency prevention potential of any particular activity, but they seem to encompass a wide range of activities. Some of these, such as social skills training (see Chapter Five) mentoring programs, appear promising. Others, such as peer mediation and sports programs, do not.

Gang Prevention and Intervention

Funding for gang prevention and intervention programs is provided by BJA's Byrne formula grants, OJJDP, and potentially by Weed and Seed and Local Law Enforcement Block Grants. There are currently no restrictions on the kinds of gang programs that are eligible for support. The scientific literature suggests, but at a moderately low level of certainty, that the approach taken to gangs is critically important. It is possible that DOJ funding is supporting programs that reduce gang cohesion, in which case they are more likely to be effective. It is also possible that DOJ funds support programs that work with gangs in ways that may increase their cohesion, in which case they are less likely to be effective. Since the results of the available evidence cannot yet be generalized at a very high level of certainty, it is fairer to say that absent further evaluation evidence, the effects of DOJ-funded anti-gang programs are unknown.

JUMP: Juvenile Mentoring Program

This national discretionary program is a line-item Congressionally earmarked appropriation for both schools and nonprofit organizations to establish mentoring programs for juveniles (See Chapter One). The school-based mentoring evidence discussed in Chapter 5 is less encouraging than the findings from the Big Brothers and Sisters experiment reviewed in this chapter, but the school-based studies were also less rigorous. The \$4 million annual appropriation since 1994 was increased to \$15 million in FY 1997. No impact evaluations of JUMP have been completed, but one was solicited in 1996.⁶ Based on the available scientific evidence, the drug abuse prevention effectiveness of the Big Brothers/Big Sisters model is promising, but the school based model is of unknown effectiveness.

Based on the 1996 evaluation solicitation, it seems unlikely that the effectiveness of JUMP will be measured scientifically in the near future. JUMP is yet another rapidly developing program that would benefit more from Congressional appropriations for evaluation than for expanded operations. The 1996 evaluation was budgeted at \$150,000 per year to assess the effectiveness of a \$4 million annual appropriation covering 41 separate grantees, or about \$3600 of evaluation funding per program grantee. While JUMP is ideal for the kind of level 5 evaluation conducted in the private sector using randomized controls (Tierney and Grossman, with Resch, 1995), the under-funded DOJ evaluation

⁶ Office of Juvenile Justice and Delinquency Prevention, FY 1996 Discretionary Competitive Program Announcements and Application Kit, p. 25.

clearly made controlled testing by independent evaluators impossible. The design's reliance on program grantees for data collection compromises the independence and reliability of the data, and probably precludes such methods as obtaining police records on juvenile arrests as an outcome measure. The Congress could correct these limitations by providing twenty percent of program funds for a more limited number of JUMP sites to be evaluated using the same design as the Tierney et al (1995) study.

STOP Formula Grants to Combat Violence Against Women

This program requires that states spend 25% of their funds to prevent violence against women on each of three priority areas (see Chapter One): law enforcement, prosecution, and victim services. None of these fall into community-based crime prevention, but grants under the remaining 25 percent may well do so. The purpose of the money is not just to combat domestic violence (see Chapter Four), but also to prevent stranger violence against women in the community. Hence community-based programs to reduce rape, stalking, purse-snatchings and carjackings would also be relevant here. The initial NIJ process evaluation of the program did not identify any community-based programs (Burt, 1996), nor was our review able to identify any impact evaluations of community prevention programs for stranger violence against women.

IMPROVING EFFECTIVENESS THROUGH BETTER EVALUATIONS

Community-based programs are among the most difficult to evaluate. They may also be the most important. The "small science" approach to evaluations of community programs has prevented the discovery of programs of proven effectiveness in this vital institutional setting. The effectiveness of community prevention might be greatly increased by a substantial investment in more controlled testing of program effects on serious crime. The Department of Labor has invested \$15 million in a randomized test of a single job training program. The prevention of serious crime in communities where it is heavily concentrated should warrant at least that much.

A fast-track strategy for advancing knowledge about community crime prevention is a multi-level randomized trial, with experiments imbedded in experiments. Mentoring programs, for example, can be randomly assigned to half the communities. Then within communities, the program can be provided to half the applicants. Gang prevention strategies for reducing cohesion can be randomly assigned to half of the communities, and then within half of the communities receiving the program it can be randomly assigned to half of the gangs. If "communities" are defined at the level of Census tract, there could be several hundred units of analysis available for this kind of multi-level research design.

The design could also embody elements that would always be delivered to the entire community. Substantial increases in police patrol, for example, could greatly reduce the crime rate in the short run. That, in turn, could assist efforts to attract new employers to the community, creating long-term employment opportunities. That, in turn, could diversify

the class and race composition of the neighborhood, reducing hypersegregation on both variables as a risk factor. Drug prevention programs, recreation centers, school and family-based programs could be added as well. While many of these elements are already part of OJP funding plans, the method of testing them in randomly assigned combinations is not.

A broader experiment in community-based mentoring could draw separate samples from systematically different communities, chosen on theoretical grounds. A contemporaneous trial in two segregated inner-city communities of concentrated poverty, two predominantly white but high single-parent family suburban areas, and two racially and economically mixed areas would answer a key question: is whether the effects of the mentoring program vary by community context. An added comparison of Hispanic and African-American poverty areas would also illuminate the role of ethnicity, if any, in conditioning the effects of community-based mentoring. Separate random assignment schedules in each location would allow a strong test of interaction effects, rather than the multivariate correlational methods used in the Tierney and Grossman with Resch (1995) test.

The importance of testing mentoring in different communities is clear. Many prevention strategies evaluated in this report produce different effects for different kinds of people, and in different community contexts. The Cambridge-Somerville experiment is a caution that mentoring, like gang intervention, may well backfire. It would be a mistake of both science and policy to support community-based mentoring for all communities on a one-size-fits-all basis. While that may well be the ultimate result of such a research program, the possibility of differential effects must be carefully examined.

Additional elements for a national experiment for dealing with high crime communities are suggested in the following chapters. Regardless of the specific elements included, the scientific basis for such an experiment remains the same. While scientists clearly disagree over the best way to handle the difficulties of community-level prevention (Bloom, 1996; Farrington, 1997), there is substantial agreement that we are not learning enough about the relative effectiveness of different strategies for community-based crime prevention.

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Chapter Four

FAMILY-BASED CRIME PREVENTION

by Lawrence W. Sherman

Family risk factors have a major effect on crime. Family based crime prevention can directly address those risk factors, with substantial success. The more risk factors they address, perhaps, the better. The earlier they start in life, it seems, the better. Programs for infants and young children may be most cost-effective in the long run, even if they are expensive in the short run. Combining home-visit parental support with preschool education reduces crime committed by children when they grow up. Rigorously evaluated pilot projects with tightly controlled prevention services are consistently effective. Family problems later in life are more difficult to address, especially family violence by adults. But it is still possible. The potential of early, adolescent and adult family-based crime prevention is held back only by our failure to invest in more research and development. The need for testing programs that can work on a large scale is particularly great.

Most of these conclusions have been reached independently by diverse scholars from diverse disciplines (Yoshikawa, 1994; Tremblay and Craig, 1995; Hawkins, Arthur and Catalano, 1995; Crowell and Burgess, 1996; Kumpfer, Molgaard and Spoth, 1996; Wasserman and Miller, forthcoming). Given the normal disagreements among social scientists, the level of consensus about these conclusions is striking. But of all these conclusions, the need for further careful evaluations is the strongest point of agreement. Evaluating the varieties of possible transitions from a small pilot test of a program to a large-scale operation is a step that is frequently left out, as it was in the case of Head Start (Lazar, 1992, and Zigler, 1992, both as cited in Yoshikawa, 1994). There is no government institution fully prepared to deliver family-based prevention of the kind found effective in the scientific literature. Making the most out of what we know already will require even more knowledge about how to go from pilot tests to full operations.

Much more is known about making families better at child-raising than about preventing family violence. A recent review of the effectiveness of criminal sanctions in combatting domestic abuse concludes that the evidence in favor of these programs is either weak or absent (Fagan, 1995). Batterer's counseling, mandatory arrest, special prosecution and victim advocacy programs all remain essentially unevaluated. While theoretical inferences support such programs as battered women's shelters to reduce danger during the high-risk aftermath of an incident reported to police, there is no assurance that any of these programs actually increase long-term victim safety. Court orders of protection and other legal steps advised by victims' advocates may even increase risk of serious injury to victims. Mandatory arrest for misdemeanor spouse assault without prosecutorial action or court treatment has been found to be either ineffective or criminogenic in repeated controlled trials, although it is effective in communities of strong social capital.

Perhaps least is known about the extent to which the same family-based programs can prevent both family violence and delinquent acts by children in the family. One home-visit program for infants, for example, reduced child abuse, which is both a crime of domestic violence and a risk factor for later delinquency of abused children. The potential for broadening the outcome measures and objectives of family-based crime prevention is important for public policy analysis. It has great potential, for example, in helping to design a program that might work on a much broader scale than the pilot tests to date, most of which are limited to a few hundred participants or less. It is also one more good reason to invest more heavily in research and development.

This chapter briefly reviews the variety of family-based crime prevention programs. It then considers a few of the major research issues in evaluating and designing family-based prevention. Five major areas of research are then examined in detail, each in relation to an ecological context where families seek or receive help affecting crime and risk factors: homes, pre-schools and schools, clinics, courts, and other contexts. The chapter concludes with a scientific summary of what works, what doesn't, and what's promising, with assessments of what is known about the effectiveness of federally funded programs and suggestions for improving effectiveness through better evaluations.

VARIETIES OF FAMILY-BASED CRIME PREVENTION

Family-based crime prevention is an unintended beneficiary of the vast research enterprise on human development. Much of what we know about it comes from evaluations of programs established for other purposes. Many of these human development programs are highly elaborated, each with its own terminology, literature, and professional community. As programs intended to improve parents' child-rearing skills, children's academic skills, or children's mental health, they have often resulted--almost coincidentally--in reduced crime. This fact underlines the importance of defining prevention not as intention, but as result. It also shows how basic to human experience the factors affecting the risk of crime can be.

Several analyses of risk factors for both serious and general delinquency conclude that family factors are important. While serious crime is **geographically** concentrated in a small number of high crime communities, it is **individually** concentrated in families with anti-social parents, rejecting parents, parents in conflict, parents imposing inconsistent punishment, and parents who supervise their children loosely (Tremblay and Craig, 1995: 158). Several analysts conclude that these risk factors are cumulative, and that the more of them a prevention program can address the better (Coie and Jacobs, 1993; Yoshikawa, 1994; Tremblay and Craig, 1995; Wasserman and Miller, forthcoming). This hypothesis is consistent with much of the literature, and not falsified by any direct test. Perhaps the best way to explore it is to evaluate rigorously prevention programs addressing different numbers and combinations of risk factors.

Risk Levels and Prevention Strategy

The basic structure of family-based prevention programs depends upon strategic choices with public safety, budgetary and political consequences. The basic choice is between **universal** and **targeted** programs (Institute of Medicine, 1994). Universal programs are offered to, or even imposed upon, all families. In several European countries, for example, all families with newborn children are required to admit trained nurses to their homes to visit the baby. This program applies to everyone without regard to any risk factors. **Targeted** programs are of two kinds. One kind is "**selective**," in which families (or individuals) identified as being at high risk are offered or mandated to receive a service intended to prevent the onset of harm. The other kind of targeted program is called "**indicated**." In the case of crime and delinquency, indicated programs are offered to prevent recurrence of crime by children already manifesting crime or crime risk factors. Because the term "targeted" in crime prevention policy is increasingly unacceptable to African-Americans as too resonant of racially discriminatory practices, this report will substitute the term "focused" to denote the same concept.

The choice between universal and focused programs is complex. Focused programs may make more efficient use of scarce resources, but universal programs may attract greater resource levels per family. It may not be necessary to allocate resources equally to all families within a program. But it may well be necessary to have the program itself be universal in order to make a very high cost investment politically palatable. The failure of Head Start to obtain full funding, for example, may be linked directly to the fact that it is seen as a program for poor children, rather than for all children.

Families with high levels of crime risk factors may also be more likely to accept universal programs than focused ones. This may be particularly important for more intrusive interventions into family life, such as frequent home visitation. Any possible stigma of such intrusion may be limited by the universal character of the program. To the extent that risk factors in some geographic areas are correlated with race, focused programs may be even more problematic. But programs applying to all children and all families avoid any implication of discrimination.

Even though this report generally concludes that crime prevention can be most effective when scarce resources are focused on concentrations of risk factors, family-based crime prevention provides an important exception. What makes sense across cities and even schools may not work at the level of family life. The state's relationship to the citizenry is most sensitive in the institutional setting of the family. Interpreting the policy implications of the scientific evidence reviewed in this chapter can be accomplished most usefully with the issue of universal versus focused programming in mind. **The "elasticity" of demand for such programs may be such that the more expensive they become through universal access, the more likely they are to be fully funded.**

Figure 4-1

Family-Based Crime Prevention by Ecological Context

Ecological Context	Program	Prevention Agent (s)	Delivery
HOME	Regular visits for emotional, informational, instrumental and educational support for parents of preschool (or older) children	Nurses, Teachers, Para-professionals, Preschool Teachers	Universal or Selective Rarely indicated
	Foster care outplacement for the prevention of physical, sexual abuse or neglect	Family services, Social worker	Indicated
	Family preservation of families at risk of outplacement of child	Private Family, preservation teams	Indicated
	Personal alarm for victims of serious domestic violence	Police	Indicated
	In-home proactive counseling for domestic violence	Police, Social Workers	Indicated
PRESCHOOL	Involvement of mothers in parent groups, job training, parent training	Preschool teachers	Universal or selective
SCHOOL	Parent training	Psychologists, Teachers	Indicated or Selective; some universal
	Simultaneous Parent and Child Training	Psychologist, Child Care Workers, Social Workers	Indicated or selective

CLINICS	Family Therapy	Psychologists, Psychiatrists, Social Workers	Indicated, Selective
	Medication--psychostimulants for treatment of hyperactivity and other childhood conduct disorders	Psychiatrists, Psychologists, Pediatricians	Indicated
HOSPITALS	Domestic Violence Counseling	Nurses, Social Workers	Indicated
	Low-Birthweight Baby Mothers' Counseling & Support	Nurses, Social Workers	Indicated
COURTS	Prosecution of Batterers	Police, Prosecutors	Indicated
	Warrants for Unarrested Batterers	Police, Prosecutors	Indicated
	Restraining Orders or "Stay- Away" Orders of Protection	Police, Prosecutors, Judges, Victims' Advocates	Indicated
	Hotline Notification of victim about Release of Incarcerated Domestic Batterer	Probation, Victim Advocates	Indicated
BATTERED WOMEN'S SHELTERS	Safe Refuge during high-risk 2-7 days aftermath of domestic assault; counseling; hotlines	Volunteers; staff	Indicated

The Ecology of Family-Based Prevention

Despite the potentially greater appeal of universal programs, Figure 1 reveals a striking fact: almost all family-based crime prevention is currently offered on a focused basis. Absent an indicated reason to intervene in family life, American government generally leaves families alone. In contrast to many other western nations, the United States performs almost no universal monitoring of families in the home.¹

This pattern creates a distinct ecology of prevention which treats families very differently in different places (Stinchcombe, 1963). The state imposes requirements on the disease-prevention vaccinations children must receive in hospitals and medical clinics, for example, but does not generally empower public health agents to invade the home to deliver vaccinations. The authority of the school teacher is great in a school building, but ambiguous when the teacher visits a private home by parental consent. The realm of the possible in family-based crime prevention programs is defined largely by the ecological context in which the programs might be delivered, and the authority vested in the government to intervene in family life associated with each of those contexts.

These contexts, as presented in Figure 1, include schools, preschools, hospitals, clinics, courts and battered women's shelters, as well as the home itself. All other contexts are in some sense merely windows on the home, opportunities for dialogue between the state and the family that can shape the results of family life for public safety. Hospitals and schools are places where crimes in the home are often detected and reported to police, who then have legal standing to investigate events in the home. They are also places where advice and instructions about reducing risk factors can be given. Absent the indication of existing problems or high risk, however, there are no universal crime prevention mechanisms comparable to medical vaccines.

This chapter is therefore a review of the effectiveness of programs within one strategic realm of family-based crime prevention: **focused** interventions. This represents an existing choice not to develop universal programs. It does not, of course, show whether focused programs are more or less effective than universal programs might be. In order to answer that question, it is necessary for a large-scale program of research and development

¹ This discussion is limited to government, rather than a broader range of institutions, by the content of the available research. All of the available program evaluations examine the effects of government programs, broadly defined to include schools and publicly supported health care. Other institutions, such as churches and charities, no doubt provide crime prevention services (also broadly defined) to families. But in the current social structure of American life, it seems unrealistic to expect private resources to fund the level of intervention that research suggests is needed to appreciably reduce serious crime rates. While churches and other private groups may be ideal for administering such efforts under government contracts, the level of resources associated with the evaluated programs far exceeds those likely to be raised from solely non-public sources.

to compare universal and targeted programs for their relative effectiveness. To the extent that universal programs might detect and prevent more problems than targeted programs, their value remains a major untested hypothesis in family-based crime prevention.

EVALUATING FAMILY-BASED CRIME PREVENTION

Scientific evaluations of family-based crime prevention programs face at least three distinctive problems, compared with other institutional settings. Perhaps foremost is the long time horizon often needed to measure the effectiveness of prevention programs. Also important is the possible variation in effectiveness by intensity or accumulation of risk factors. There are also unique problems in measuring crimes committed by family members against one another, in relation to both privacy and safety for research subjects and accuracy of measurement.

Long Time Horizon

A basic premise of developmental crime prevention is that what happens during infancy can affect the odds of crime two or three decades later. Giving this theory a fair test requires a very long time horizon. Sustaining the test over the time required creates problems of cost, management, and interpretation.

The problem of cost is not as great as it seems. Numerous birth cohort studies of delinquency have been funded intermittently over decades, keeping track of where to find the research subjects for repeated interviews and official record checks (Farrington, Ohlin and Wilson, 1987). The current OJP limitation of grant periods to two years poses more of a management problem than a cost problem, creating uncertainty about commitments to employ key staff and other planning issues. Relaxing that limitation for five- and ten-year projects would ease those difficulties, and help encourage more tests of developmental crime prevention strategies. The major problem this creates in interpreting available evidence is that there are so few long-term studies to examine.

The problem of management is perhaps more critical to interpretation of long-term findings. The two longest running tests of developmental crime prevention are both reputed to be very well managed programs (Berrueta-Clement et al, 1985; Lally, et al, 1987). Critics have raised the problem of generalizing from the results of small, well-managed programs to large, bureaucratically administered programs. The key question is how accurately we can predict that a long-term program serving tens of thousands of families will have the same effects as a short-term test program serving several hundred families for 3 to five years. In order to answer that question, we require research designs testing much larger scale programs over a longer period of time. That requires not only much greater cost, but a separate political process necessary to sustain the resources for the time horizon required. For example, ten years worth of birth cohorts might be needed to see if the long-term effects of a program operating during the enthusiasm (or confusion!) of an initial launch were the same as a program that was three, five, eight or ten years old.

Finally, the issue of interpretation is compounded by the speed with which our society is changing. By the time the results are in from a two-decade old test, the context of the program may have changed in important ways. Perhaps more qualified preschool teachers were available in the early 1960s than today, for example. Or perhaps the concentration of poverty in inner cities is so much worse in the 1990s than in the early 1960s (Wilson, 1996) that crime prevention benefits found in an earlier study would not stand up to today's more intense risk factors. Early feedback from measures of protective factors (like school conduct assessment) and child abuse might help solve this problem, providing both short- and long-term feedback. Conversely, short-term child abuse interventions such as Olds et al (1986) provide excellent opportunities for long-term followup of delinquency prevention, and even domestic violence prevention. Generating and funding such followup research should be a high priority for OJP. Similarly, short-term followups of drug abuse prevention programs merit much longer term followups, to see whether other factors cancel out early effects of interventions.

Cumulative Risk Factors and Contextual Data

This report's concern for the interdependency of crime prevention institutions is not widely shared in crime prevention research. Many clinic-based studies, for example, do not report precise data on the neighborhoods from which the research subjects are drawn. It is one thing to say that the children are from families on welfare or have teenage mothers. It is another thing altogether to report that 35% of the families in the sample reside in neighborhoods with adult unemployment rates in excess of 70%, and with 60% of households in the census tract below the poverty line (see Chapter two). Very few individual-level experiments report community-level data in the degree of specificity needed to begin to synthesize results and draw broader conclusions about program effectiveness.

Family-based prevention programs may work well in areas of high risk, but only up to a point. For example, clinic-based parent training for parents of aggressive elementary school children may work in all neighborhoods in Oregon, but not in many neighborhoods in Chicago. If there is a tipping point beyond which a parentally focused program may not work, it cannot be identified from the literature without more precise measurement. There is also a problem of consistency of the treatment itself across cities and treatment staff. That may interact, in turn, with the accumulation of risk factors. Some treatment staff or clinics may have greater capacity or experience to deal with concentrated risk factors than others.

Resolving the interaction of risk level with treatment effectiveness requires systematic attention and costly cross-site scientific designs. Planned variations in staff capacity, neighborhood social factors and family variables must be structured into the research design. Controlled experimentation with treatments across sites, as distinct from comparing naturally occurring variation in local treatment capacity, is required to bring a scientific methods score up to level 4 or 5. There is little precedent for this kind of research. But without it there will remain major limitations in generalizing from single-site

experiments.

Measuring Crime in the Family

The issues of privacy and retaliation in measuring crimes within families pose a great challenge for research. Continuing disagreements about the interpretation of existing measures have afflicted even the strongest of research designs (Fagan, 1996). The central problems are low completion rates of personal interviews with victims of family crimes who have been treated, low or inconsistent reporting rates of subsequent crimes to police, and unwillingness to disclose crimes committed in the family during interviews in the home while other family members are present (NCVS study).

In several sites of the NIJ spouse assault replication project (SARP), for example, there are different results found from victim interviews and official reports to police. While victim interview data showed that arrested offenders had committed fewer repeat offenses than offenders randomly assigned to a warning, the official data showed the opposite (Dunford, et al, 1990; Berk et al, 1992). In other cities the victim data showed no effect of arrest while the official data showed some evidence of a backfiring effect (Hirschel, et al, 1990; Sherman, et al, 1991). But a major difference between these data was the completion level: official data covered 100% of the sample while the victim interview rates were as low as 23%, and averaged 41% in sites reporting a deterrent effect from victim interviews. Thus the effects of arrest may have interacted with victim willingness to be interviewed, biasing the sample towards victims who had enjoyed a protective effect from arrest.

The measurement theory challenging official data on family violence is that experimentally assigned criminal sanctions may encourage victims to call police more readily, whereas experimentally assigned warnings may discourage victims from calling police. Thus the higher rates of reported reoffending with the arrested subjects is arguably due to a measurement artifact. This theory does not explain why there are fewer repeat offenses reported about **employed** offenders randomly assigned to arrest compared to those assigned to a warning, and why the measurement artifact would only apply to unemployed offenders. A further theory could suggest that partners of employed males are less likely to call police than partners or unemployed males after an arrest has been made for fear of the employed batterer's losing his job. But none of these theories have been tested directly.

Possible solutions to these problems may lie in focusing scarce resources on prevention and measurement of injuries treated in hospital emergency rooms. Hospital cooperation with data collection on an anonymous basis could then provide more reliable measures of domestic violence (Sherman and Strang, 1996), although even then questions will remain.

PREVENTION AT HOME

Perhaps the most promising results in all areas of crime prevention are found in the evaluations of home visitation programs. While these programs are often combined with

other institutional elements, such as preschool, there is a large and almost uniformly positive body of findings on this practice. Other prevention programs delivered in the home context, such as personal alarms for domestic violence victims and family preservation services, have been subject to far less research. These programs, however, generally operate on an indicated basis after crime problems have developed rather than on the selective basis of the home visitation programs. Combining these two findings may suggest even more reason for testing universal home-based prevention programs, to see if possible benefits of child-centered programs may be extend to family crimes involving adults.

Home Visitation Programs

Home visitation varies enormously in dosage levels, content, skill, and context. Yet there are common effects reported across all these variations. These common effects may be linked to a common core of treatment content, for which dosage levels may matter more than other dimensions. The common core of home visitation is a visitor who cares about child-raising sitting down in a home with a parent and a child. Visitors can be nurses, social workers, preschool teachers, psychologists or paraprofessionals. They can provide cognitive information, emotional support, or both. They can actively teach parents, with hands on the children. Or they can passively watch and listen, merely giving parents a good listening to. They can be trained in health (like nurses), human development (like psychologists and social workers), cognitive and social skills instruction (like preschool teachers) or some mixture of these subjects (like paraprofessionals). They can be experienced or novice, enthusiastic or burned out, assertive or hesitant. But no matter who they are or what they do, they provide a bridge between the parent, usually a mother, and the outside world.

Figure 2 summarizes the results of 18 different evaluations of programs that included a home visitation component. The Figure and this discussion draws primarily on the material in Yoshikawa's (1994) review, as well as Tremblay and Craig's (1995) and the draft OJJDP review prepared by Wasserman and Miller (forthcoming). Based on the limited information provided in the secondary reviews, the primary studies appear to merit level 4 to 5 scientific methods scores by the standards of this report, although some might drop to a 3 if they suffer large attrition problems. All of them show positive effects of home visits on either some measure of crime by children when they enter adolescence (N = 2 experiments), child abuse during or shortly after the period of home visits (N = 5 experiments), or risk factors for delinquency (N = 10 experiments, 1 meta analysis). While the meta-analysis of Head Start evaluations (McKey, et al, 1985) shows that the measured effects wear off, that analysis includes the lowest dosage of home visits of any of the experiments: as few as two per year. In contrast, the substantial reductions in later delinquency in the two long-term followup studies are associated with weekly home visits for periods up to five years.

Figure 4-2

Evaluations of Home Visitation Programs

(All studies ranked Level 4 or 5 on Scientific Methods Score)

(Secondary Review Sources: Yoshikawa, 1994 unless otherwise indicated; Tremblay & Craig, 1995; Wasserman & Miller, Forthcoming)

Primary Source (Secondary source if not Yoshikawa)	Effects	N of Visits, Time	Visitors, Visited	Other Service	Age of Child
EFFECTS ON CRIME					
1) Berrueta- Clement et al 1984 High/Scope Perry Preschool	Lower adult arrests by age 24 Exp= 7% Control = 31% (N = 121)	Weekly, 2-3 years, 30 weeks per yr (60 to 90 visits)	Teachers, High risk African- American children & their mothers	Pre- school; Parent Groups	3-5 yrs
2) Lally, et al 1987 Syracuse University Family Development Research Program	Lower arrests by age 15 Exp = 6% Control = 22% (N = 119)	Weekly, 5 years (260 visits)	Paraprofs, Low income, mostly African- American children & their mothers	Pre- school; pre- natal	0-5
3) Olds, et, al, 1986, 1988 University of Rochester Prenatal/Early Infancy Project	Lower Child Abuse by age 2 Exp = 19% Control = 4% (N = 300)	Bi-weekly over 122 weeks from late pregnancy (up to 60 visits)	Nurses, first born infants of high- risk low income white mothers	Doctor Visits	0-2
4) Barth, Hacking & Ash 1988	Lower child abuse removals from home of exps. (N = 50)	Bi-weekly over 26 weeks after birth (12 visits)	Paraprof, children of mothers at risk for abusing them	Taught Parent Skills	0-6 mos

5) Gray, et al, 1979	Fewer Injuries of Experimentals (N = 50)	Weekly over an average of 130 weeks (130 visits)	Nurses, children and high risk mothers	Doctor visits	0-2.5 yrs
6) Infant Health Program (Tremblay & Craig)	Less child abuse & neglect of experimentals (N = 985)	? 3 years	? , High risk children	pre-school	0-3 yrs
7) Larson 1980 Montreal Home Visitation Study (Wasserman & Miller)	Fewer Injuries of Experimentals (N = 95)	10 visits, most effect from 1 in pregnancy, 9 over 15 mos.	BA Psychologist, infants of Canadian mothers in Montreal	--	0- 15 mos.
EFFECTS ON CRIME RISK FACTORS	Effects	N of Visits, Time	Visitors, Visited	Other Service	Age of Child
8) Seitz, et al 1982 Yale Child Welfare Project	Less anti-social behavior in school at age 10 by exp boys (N = 30)	Mean = 28 visits over 2.5 years	nurse, social worker or psychologist, low ses first-borns and mothers	Doctor Visits	0-2.5 years
9) Johnson & Walker 1987 Houston Parent-Child Development Center	Less anti-social behavior in school at age 10 by exp children (N = 113)	25 visits first year of life for experimentals	Paraprofessional, Low ses only children of Mexican-American families	Pre-school and parent classes 2d YR	1-3 YRS
10) Wasik et al 1990 Project Care	Higher cognitive scores up to 54 mos. with Home visits + cognitive day care than with only home visits (N = 62)	Biweekly from 0-3; monthly 4-5 months of age	Teachers and paraprofs, infants of low ses parents	see column 2	0-5 mos

11) Achenbach et al 1990 Vermont Intervention Project	Experimental children had greater cognitive skills by age 7 (N = 56)	11 home visits, 0-3 mos	Reg. Nurse, Low Birth weight children	None	0-3 mos
12) McKey et al 1985	Head Start Meta-analysis shows effects wear off (N= 26 studies)	Varies, minimum 2 visits per year	Preschool teachers; children of families in poverty	Pre school	3-4 yrs
13) Gutelius et al 1977	Experimental children higher on cognitive scores to 3 yrs. (N = 95)	Yr 1=18+ visits Yr 2=12+ visits Yr 3= 8+ visits	Nurses, first children of unmarried mothers	None	pre-natal to 3 years
14) Barrera et al 1986	Experimental mothers more responsive to age 1 LBW child (N = 83)	Weekly 0-4 mos Biweekly 5-9 mos Monthly 10-12 mos	Paraprof, Mothers of LBW infants	None	0-1 Yr
15) Ross 1984	Mothers more responsive, children better cognition age 1 (N = 80)	Biweekly 0-3 mos Monthly 4-12 mos	Nurses, low ses families with LBW infants	None	0-1 Yr
16) Jacobson & Frye 1991	Exp. Mothers and Infants more attached at age 1 (N = 46)	Monthly in pregnancy Weekly 0-2 mos Monthly 3-12 mos	Paraprof, firstborn children of low-ses mothers	None	Pre-natal to 1 Yr
17) Lieberman et al 1991	Exp. children less anxious at age 2 (N = 93)	Weekly (52)	Social Worker (MA, MSW), low ses anxious and secure Hispanic children	None	1-2 years
18) Lyons-Ruth et al 1990	Exp. mothers and infants more attached at 18 mos (N = 76)	Weekly from intake at 0-9 mos up to completion at 18 mos	Paraprof and MA level; children of high risk mothers	None	9-18 mos

While the two long-term experiments both included preschool programs (also called "day care" in some studies), positive effects were found in 11 of the experiments from home visitation without preschool. Some of the home visitations included doctor's office visits or some other contexts for instruction and observation outside the home, but most did not. None of the five experiments showing that home visitation reduced child abuse included involvement in preschool.

The consistent finding of beneficial effects of home visits without preschool is important for several reasons. One reason is theoretical: it shows that the visits are not simply a spurious correlate of the effects of preschool programs on both the children and their mothers, who in some studies are heavily involved in the preschool programs and who show beneficial effects themselves in reduced welfare support and longer time between pregnancies. The fact that one trial (Wasik, et al, 1990) found stronger effects from home visits with cognitively oriented day care than from home visits to comparison families (of which over half were in some other kind of day care) does not contradict the independent effects of home visits. Yoshikawa (1994) and others have concluded that home visits are likely to be more effective in combination with early education, but the empirical evidence may be still too preliminary to reach a conclusion either way.

Even if home visits were more effective in combination with other prevention efforts, the evidence of their independent effect has practical implications. The Hawaii state Healthy Start program, for example (U.S. Advisory Board, 1995: 129), which reaches over half of all Hawaiian newborns, operates on a \$7 million annual budget as a home visit program only. The evidence reviewed in Figure 2 suggests that the Hawaiian program is likely to be effective at reducing child abuse, as would federal funding of home visit programs nationally. Whether they would be effective at preventing delinquency or serious crime in later life by the children visited cannot be determined without longer-term studies. Child abuse and neglect is a risk factor for delinquency, however, associated in one prospective study with a 50 percent increase in prevalence and a 100% increase in frequency of adolescent arrests (Widom, 1989). Thus if the results of the home visitation experiments can be generalized to other settings, they could clearly reduce a delinquency risk factor.

The effect sizes in these evaluations are particularly impressive. Both of the long-term delinquency prevention effects are on the magnitude of a relative reduction of three-quarters less prevalence of official criminal histories. Similarly, the Rochester University study found a 79% relative reduction (4% compared to 19%) in child abuse. It is unlikely that an effect of this magnitude could be replicated nationally across all child abuse cases because the same effect size is not observed in low-risk as in high risk families. Such large effects are also unlikely to persist beyond the first two years of life. But applying the effect size to the estimated 675,000 physical child abuse cases annually would reduce that number to 142,000, or prevent 533,000 serious crimes (Reiss and Roth, 1993: 228). If the 1 million neglect cases are included as well, then an additional 800,000 serious crimes might be prevented by home nurse visitation. Perhaps the most immediate question in

advancing the capacity to generalize from controlled trials to national effects is the generalizability of the Rochester University results from a rural white upstate New York sample. A long-term trial of a similar approach among 1,100 African-American families in Memphis (National Research Council, 1993: 172) may soon report crucial results on this point.

Foster Care and Family Preservation

Families in which child abuse is proven pose a major dilemma between family preservation and prevention of recidivism. The many documented deaths and injuries of children after prior reports of abuse underline the seriousness of the dilemma. But the potential benefits of keeping thousands of families together must be weighed against the cost. The current state of the evaluation science of these two alternatives does not allow precise estimation of the costs and benefits. But a recent review of the evidence by a National Academy of Sciences panel finds that the larger problem is not the choice between family preservation and foster care. The problem is that in so many cases neither course is taken.

The review found a national survey showing that more than one-third of confirmed cases of child maltreatment received no therapeutic or support services (McCurdy and Daro, 1993, as cited in National Research Council, 1993: 268). This result occurs after 50 percent of the reported cases of maltreatment are found unsubstantiated, and the child protective services agency is required to decide whether children can remain safe in the home during treatment of the family. The officials making these decisions are often understaffed, with poor training and high turnover. In 1991 in New York City, for example, 77 percent of the workers investigating child abuse reports transferred to other agencies, resigned or were laid off (Dugger, 1992, as cited in National Research Council, 1993: 268).

When children are placed in foster care due to abuse, it is not clear what their risks of further abuse become. Few studies of abuse rates of the estimated 200,000 children placed in foster care each year distinguish between abuse of the estimated 50% of children who were maltreated before going into foster care and the other half who were not (Tatara, 1989, 1992, as cited in National Research Council, 1993: 271). Studies comparing rates of abuse in foster care to other settings are methodologically weak. One study almost two decades old did find that reported abuse by all foster parents is lower than that by the general population, and much lower than rates of re-abuse by abusive parents (Bolton, et al, 1981, as cited in National Research Council, 1993: 230). But even if foster care creates a protective factor against further abuse, many cities report major shortages in the availability of foster parents relative to the numbers of children judged to need it (Kammerman and Kahn, 1989, as cited in National Research Council, 1993: 271).

When children are left in their family homes after documented maltreatment, they may or may not be at higher risk of further abuse and later delinquency. A review of four

major federally funded studies of the effectiveness of treatment across 3,253 families with abuse and neglect problems found that even early and costly services are "not very successful" (Cohn and Daro, 1987, as cited in National Research Council, 1993: 255). Yet the scientific literature in this area is characterized by many of the limitations of general concern in this report (National Research Council, 1993: 254):

the research generally does not include controlled experiments, has limited sample size, uses questionable measures to assess performance, and common assessment strategies have not been used across different interventions, making it difficult to know what works for whom.

The scientific methods used to evaluate family preservation programs have been stronger, but the results have been no more encouraging than for standard in-home treatment. Family preservation are often intense (20 to 30 hours per week), brief (often 6 weeks) programs designed to prevent foster care placement through a variety of strategies. These include strengthening family bonds, improving family skills, and providing stability in crisis situations. Rigorous experimental and quasi-experimental designs evaluating these programs show equivocal results, both on prevention of outplacement and longer-term outcome measures (National Research Council, 1993: 264-65). The studies have not yet disaggregated the problem by different kinds of family problems, which could produce different results. The National Research Council Panel on Child Abuse and Neglect concluded that these programs are of unknown effectiveness. But the strategy remains popular because of its significant costs savings, an estimated \$27,000 in tax dollars for each outplacement prevented. No estimate of the risks of death and injury associated with that cost saving are available.

Domestic Violence Alarms and Visitation

Two home-based strategies for secondary prevention of domestic violence have shown increasing use over the past decade. Personal radio alarms are indicated for extremely serious cases, while home visitation has been employed as a followup strategy after police response to a domestic disturbance call.

The personal alarm is usually a small panic button worn as a necklace. Pressing the button directly activates a message at police headquarters to dispatch a police car on an urgent basis to the home of the wearer, who uses it to signal that a batterer is on the premises (Sherman, 1992: 242; Farrell, 1995: 518-19). While the system is expensive to maintain, it can be allocated rationally based upon known risk factors. Police serving the Liverpool, England area rotate the available alarms across the most recent and highest-risk victims of serious attacks, based on their finding that repeat attacks were most likely to occur within thirty days after the last attack. This finding of highest risk of repeat victimization in the first 24 hours and first 30 days after the last incident has been replicated in a sample of 40,000 cases in an around Melbourne, Australia (Strang and Sherman, 1996), and is an important basic research finding of indirect evidence in support

of the use of personal alarms. Unfortunately, the many documented cases of domestic homicide of women who had been issued alarms shows that the system is not foolproof. While it seems unlikely to increase the risk of attack, there is no impact evaluation presently available to address the question of whether alarms are safe and effective.

The strategy of home visitation after a police contact for domestic violence or disturbances also focuses on the high-risk time period in the immediate aftermath of a police response to a domestic disturbance in the home. The strategy has been evaluated in three tests using strong scientific methods. An NIJ-funded Dade County (Florida) police experiment in the late 1980s randomly assigned four responses to misdemeanor assault cases in which there was legally sufficient evidence to make an arrest: arrest, warning, arrest with followup visitation, and warning with followup visitation. The design was thus two separate controlled tests of followup visitation by police, one test following an arrest and one test following a warning (Pate, et al, 1991). The home visits consisted of a police detective reviewing the family's history of domestic violence problems, their legal options, and social service agencies to which the detective could refer them for further assistance. The visit was a one-time treatment, with no attempt to provide a theoretically based psychological treatment. The very rigorous test of the strategy found no effects of home visits on several diverse measures of repeat domestic violence over a six-month followup period, including police offense reports, arrest reports, and victim interviews, analyzed by prevalence, frequency, and time to failure. The results were the same for visits after an arrest and visits after a warning.

A second controlled experiment included both arrest cases (21%) and non-arrest cases (79%) in the same sample randomly assigned to receive home visitation (or not) by two person police-social worker teams (Davis and Taylor, forthcoming). The home visits were observed by researchers as lasting from ten to thirty minutes, depending on the victim's receptiveness and whether the batterer was present. The team tried to educate the victim, and the batterer if present, about the seriousness of domestic violence and encourage the family to seek change through the courts or other services. Specific information was provided about how to go to court for restraining orders, and to social services including battered women's shelters, substance abuse treatment, relocation to another address, and home security. No difference in repeat violence between experimentals and controls were reported in victim interviews (response rate = 72%), but homes assigned to the experimental group generated twice as many domestic calls to police. The authors interpret this as evidence that visitation increases reporting but not violence; an alternative interpretation (untested in the analysis) is that visitation increased repeat calls, with the homes with no victim interviews accounting for a substantial portion of the total increase in the experimental group.

However the data are interpreted, there are now three strong tests of the police home visits strategy for preventing domestic violence. All three of the tests falsify the hypothesis that this strategy is effective.

Figure 4-3

Effects on Domestic Violence of Proactive Home Visitation after Reactive Police Contacts

Study	Scientific Methods Score	Home Visitation Providers	Results
Pate et al 1991	5 (N= 447)	Police Detectives	Visits after a warning had no effect on repeat violence over a 6 month followup period as reported by victim interviews or documented in official records
Pate et al 1991	5 (N= 442)	Police Detectives	Visits after an arrest had no effect on repeat violence over a 6 month followup period as reported by victim interviews or documented in official records
Davis and Taylor forthcoming	5 (N= 436)	Police-social worker teams	Visits in domestic violence public housing "hot spots" had no effect over a six month followup period on repeat violence reported by victims; calls to police about domestic incidents from experimental group almost twice as high as from control homes

PREVENTION LINKS BETWEEN PARENTS AND PRESCHOOL OR SCHOOL

Outside the home, the preschool and the school provide major opportunities for family-based crime prevention. Many of the prevention effects associated with early infancy home visits are impossible to separate from the simultaneous provision of a strong linkage between parents and preschool. As children age, the school takes over more of the child's day (see Chapter Five), but many schools continue to seek parental involvement in reducing a child's behavioral risk factors for delinquency. Without duplicating the coverage of school-based prevention in the next chapter, this section explores the evidence on family-based prevention delivered through school settings.

Developmentally, the family-school linkage can begin as early as infants are left in educationally enriched day care for even part of the day. For children whose parent or parents are employed, the availability of such care can be a crucial factor allowing the parents to work. For children who have at least one parent out of the labor force, the link to day care or preschool can be an important means of helping that parent find work. The daily structure of commuting to a child care center, and of spending part of each day or week there, can help establish patterns essential for participation in mainstream society. Effects of maternal participation in preschool in studies reviewed by Yoshikawa (1994) included increased employment, reduced welfare dependency, and increased time between giving birth. To the extent that these effects were also linked to home visitation, however, the greatest certainty about generalizing from these results lies in framing them as a combined preschool-home visitation effect.

School setting programs for parent training and family-based prevention with older children also combine several different treatments. The recent review by Tremblay and Craig shows generally positive effects of these programs on delinquency or, more often, risk factors for delinquency with indicated or selective samples. Many of the evaluations suffer from small samples, short (or no) followup periods, and other methodological weaknesses. But the consistency of the results suggests that school-family outreach to train parents of problem children could be an effective means of preventing delinquency in certain kinds of areas.

Children at Risk. Unfortunately, the results of the moderately strong evidence in Figure 4-4 were not confirmed by a very strong test of a very expensive program linking schools and families of very high-risk youth to a wide range of services in very high risk neighborhoods. The Urban Institute's four-year NIJ-funded evaluation of the Children at Risk program in Austin (TX),

Figure 4-4
Effects of Parent Training in School Settings
(Secondary Review Source: Tremblay and Craig, 1995; Scientific Methods Not Scored)

Primary Source	Type	Sample	Treatments	Effects
Tremblay et al 1994	Indicated	160 boys aged 7 years at outset	2 Years of parent training, social skills training	6-Year Followup showed lower self-reported (ES= .25) and official (ES = .07) delinquency, better school adjustment
Hawkins et al 1992	Universal	1,659 boys and girls aged 6 at outset	4 years of training of parents, teachers, students	5 month followup showed lower self-reported delinquency (ES= .16), better parenting, attachment to family & school
Pepler et al 1991	Indicated	40 boys & girls aged 8 years	12 weeks of parent and student training	3 month followup showed better control over some disruptive behaviors, not others
Horn et al 1990	Indicated	42 boys & girls aged 7 to 11 years	12 weeks of parent training and child self-control therapy	8 month followup showed better social control, less hyperactivity and conduct problems
Kolvin et al 1981	Selective	574 Children age 7 years	3 to 15 months of parent counseling, group therapy	20 to 32 month followup showed less anti-social behavior and neurotic problems

Bridgeport (Conn), Memphis, Savannah and Seattle was a randomized trial with 671 experimentals and controls, plus 203 youth in comparison neighborhoods (Harrell, 1996). Eligible subjects were referred to the program between ages 11 and 13 while attending 6th or 7th grade at the middle school in the study neighborhood in each city, where they were required to live. Referrals from school, police or courts were based on indicators of at least three school risk factors (such as truancy), one family risk factor (such as parental violence), or one personal risk indicator (such as prior arrests or gang membership). Service protocols were locally determined in each site, including some help from each of the following services: social work, family services, tutoring or educational services, recreational after-school and summer programs, mentoring, gifts and special events, community policing and juvenile courts. Half the sample was African-American and one third was Hispanic. Funding from private and DOJ sources for the program cost between \$11 and 20 million.

The preliminary findings from the evaluation so far have shown that these intensive and expensive interventions combined had virtually no effect. The findings are based on self-reported behavior by the experimental and control adolescents, with a 75% response rate after four years from the original randomly assigned sample. No differences were detected in attrition patterns by treatment group, which gives the analysis a scientific methods score = 5. The interviews show no difference within the high-risk areas between experimentals and controls on self-reported delinquency, drug use in the past month or entire lifetime, or sexual activity. A small difference in weapon carrying favored the treatment group. Further analyses still to be reported include officially measured crime and delinquency from police and court records, which will cover 100% of the experimental sample and not just the survey respondents (Harrell, 1996). Thus the conclusions could change. Even with the best possible results from official data, however, further findings on the effectiveness of services costing about \$35,000 per child will be unable to provide clear evidence of effective crime prevention.

The CAR findings from self-reported delinquency do not provide much guidance on how to prevent crime effectively in the places where prevention is needed the most. But the negative findings may not generalize to lower-risk families, adolescents, schools or neighborhoods. Figure 4-3 suggests that multi-treatment school outreach to parents might be effective with other samples. Similar results suggest the same about family therapy clinics working with families of children showing risk factors, either in the clinical setting or with the clinicians working with families in the home.

PREVENTION IN CLINICS

One key factor in the Children at Risk evaluation may have been the low parental involvement with the adolescent (Harrell, personal communication, 1996). Where parents can be successfully engaged in the question of how to raise their children more effectively, the results may be more encouraging. Figure 4-5 summarizes Tremblay and Craig's review of twelve evaluations of family therapy. Only one of these has a delinquency measure, but

Figure 4-5
Effects of Family Therapy Interventions By Clinical Staff
(Secondary Review Source: Tremblay and Craig, 1995; Scientific Methods Not Scored)

Primary Source	Type	Sample	Treatment	Effects
Therapy Delivered in Clinics				
Kazdin et al 1992	Indicated	97 boys & girls around 10 years old at outset	6 to 8 months of cognitive-behavioral parent training	1-Year Followup showed lower self-reported delinquency (ES=.25), anti-social behavior and parental stress
Dishion et al 1992	Selective	58 boys and 61 girls aged 10 to 14 at outset	12 weeks of parent training, self-regulation	During treatment child's Anti-social conduct and parent's negative discipline declined; home conduct worse
Yu et al 1986	Indicated	35 boys aged 7 to 12 years	20 weeks of parent and student training in problem-solving	During treatment boys improved on problem-solving, externalizing and social competence
Horn et al 1990	Indicated	42 boys & girls aged 7 to 11 years	12 weeks of parent training and child self-control therapy	8 month followup showed better social control, less hyperactivity and conduct problems
Kolvin et al 1981	Selective	574 Children age 7 years	3 to 15 months of parent counseling, group therapy	20 to 32 month followup showed less anti-social behavior and neurotic problems

Clinical Therapy Delivered at Home				
McNeil et al 1991	Indicated	30 children X = 4.9 years old	14 weeks parent training	less aggression & opposition by children during treatment
Packard et al 1983	Indicated	34 mother- child pairs, child age X = 4.3	2 weeks of parent training	11 week followup showed less problem behavior
Shure & Spivak 1979	Indicated	10 boys, 10 girls age X = 4.3	3 months of Social problem- solving and parent training	Less impulsivity, better problem- solving during treatment
Webster-Stratton et al 1988, 1990	Indicated	171 fathers & mothers of children aged X = 4.5	4 months of parent training	3 year followup showed better parenting, less child hyperactivity
Strain et al 1982	Indicated	40 boys & girls aged 3 to 5	17 weeks child & parent training	3 to 9 year followup showed less oppositional behavior and more compliance
Dadds et al 1987	Indicated	24 families with children aged X = 4.2	6 weeks of parent training, problem- solving	6 month followup showed less oppositional, more compliance behaviors by children
Strayhorn and Weidman 1991	Selective	84 children aged X = 3.7 years	5 months parent training	1 year followup shows better parenting, less hyperactivity, no effect on hostility

that one finds a prevention effect of moderate effect size. The other studies, while weaker, consistently report reductions in risk factors associated with family therapy by clinics.

A recent analysis by Kumpfer (forthcoming) also shows beneficial effects of parent training in "clinics" more broadly defined, including recreation rooms of public housing and other apartment complexes. Kumpfer's work attends to the practical issues of incentives and transportation in obtaining high parental attendance rates at training sessions focused on prevention of substance abuse by both parents and children; when such issues are properly addressed, she even finds high attendance rates in high-risk areas.

PREVENTION IN COURT

When prevention practices in all other settings fail, families often rely on the criminal justice system to stop the crime. This is especially true for problems of family violence. Compared to what is known about human development and developmental crime prevention, however, the science of domestic violence has little knowledge to offer for effective policymaking. But the opportunities for advancing evaluations of legal efforts at violence prevention are great, once the limitations of the current state of knowledge are fully understood.

The basic science of domestic violence and the law offers several well-known facts (Crowell and Burgess, 1996): domestic violence is widespread and highly under-reported to authorities. When police are called, they find no evidence of actual physical violence in over half of all "domestic" calls, and make no arrests in the majority of cases where such evidence is available. The vast majority of arrests that are made are for misdemeanor assaults with limited evidence of injury, for which prosecutors drop charges in the majority of the cases (Sherman, 1992). While the suspect is gone from the scene when police arrive in 40% of the cases in which police do have sufficient evidence to arrest, few courts or police agencies bother to issue arrest warrants unless the victim requests one by making a burdensome trip to court. Rising arrest rates for simple assault in the early 1990s has placed even more workload pressure on courts and prosecutors, for which there is some evidence that the odds of prosecution per arrest will decline. Odds of conviction per arrest for misdemeanor domestic assault are as low as 1 percent, with odds of incarceration per arrest as low as zero per 400 cases (Sherman, 1992: 337).

The prevention program often recommended in response to these facts of under-enforcement of the law is full, or fuller, enforcement. The premise of this policy is two-fold, both moral and empirical. The moral premise is that full enforcement is the proper response to all crimes, from drug possession to homicide, even though there is ample evidence that under-enforcement of the law by 50 percent or more cuts across both felonies and misdemeanors of almost all kinds (Reiss, 1971; Black, 1980; Smith and Visher, 1981). From this perspective, the crime prevention effects of fuller enforcement are not dispositive.

Fuller enforcement is also claimed, however, to have preventive effects. The empirical premise is that increasing certainty and severity of punishment will create either general or specific deterrence of domestic violence. "General" deterrence refers to prevention of crimes by people in the community generally regardless of whether they have been caught and punished for a crime. "Specific" deterrence denotes the preventive effects of punishment on people who have been caught. Both hypotheses are widely accepted as true by legislators, but hotly debated by evaluation scientists (Zimring and Hawkins, 1973; Blumstein, et al, 1978).

Rigorous scientific impact evaluation evidence is unavailable about most of the criminal law strategies for preventing domestic violence (Crowell and Burgess, 1996; Fagan, 1996). Police have been the component of the legal system most willing to engage in rigorous impact evaluations. Other agencies of the criminal justice system have repeatedly refused to allow careful testing of their effectiveness; prosecutors in Milwaukee and judges in Minneapolis are just two examples over the past decade. As a result, a great deal is known about the effects of one police decision, while little is known about most other criminal justice practices.

The National Institute of Justice has pioneered in supporting rigorous tests of domestic violence responses. This include the six offender-present and one offender-absent experiment in arrests for misdemeanor domestic assault (Scientific Methods Score = 5), reviewed in Chapter Eight. These studies find no consistent support for the specific deterrent hypothesis, in the general absence of any referrals, prosecutions or convictions after an arrest; they do find arrest is effective for employed offenders (Sherman, 1992) and absent offenders for whom police issue a warrant (Dunford, 1991). A frequent conclusion from these findings is that arrest must have followup actions in order to be effective. That hypothesis, however, remains untested. So does the general deterrence hypothesis that mandatory arrest in a city will prevent domestic violence city-wide. The hypothesis that allowing victims to decide whether or not an arrested batterer should be prosecuted will prevent violence, however, has also been tested by an NIJ-funded controlled experiment (Scientific Methods = 5). The Indianapolis Domestic Violence Prosecution Experiment (Ford, 1993) randomly assigned cases in the prosecutor's office to a policy of either "no-drop" or victim decision. The victim decision policy produced a lower repeat violence rate, also falsifying the hypothesis that full enforcement offers greater prevention.

The hypothesis that mandatory referral of arrested batterers to counseling or therapy will help prevent repeat violence has also been tested with NIJ support, although with weaker scientific methods than the evaluations described above. This test provides moderately strong evidence of a negative effect. Harrell (1991) found in a matched comparison of arrested batterers referred to court ordered treatment and those not referred to treatment that the treated group had higher repeat violence rates. Crowell and Burgess (1996: 122), however, cite several weaker studies that find the opposite conclusion. The strongest design appears to be Goldkamp's (1996) evaluation of the Dade County Domestic Violence Court program combining substance abuse treatment with domestic violence

counseling, a randomized experiment not yet reported with significance tests or other statistics (SMS = 3); preliminary results suggest a reduction in same-victim domestic violence by offenders in the combined treatment, compared to offenders given only one or the other treatment approaches. The effects of court-ordered treatment seem likely to vary widely by the specific approach to treatment, the skills of the individual therapists, the background of the batterers, and other factors making it difficult to generalize from a few weak evaluation designs (Fagan and Browne, 1993).

Most domestic violence evaluations have been focused on noninjurious violence, and very little is known about the prediction or prevention of serious injury. One of the major practices to be evaluated is the effectiveness of court orders of protection. According to an NIJ-funded study by the National Center for State Courts (1996) in Wilmington, Denver and the District of Columbia, women who seek orders of protection suffer very high rates of serious injury prior to obtaining the order. According to a matched control evaluation of women granted orders in Denver and Boulder, the one-year recidivism rates are lower against women who obtain the orders (Harrell, et al, 1993), thus supporting the full enforcement deterrence hypothesis. In the absence of any other reported impact evaluations of restraining orders, this level three study makes the use of such orders at least "promising."

PREVENTION IN OTHER SETTINGS

The effects of practices in other settings on families and their crime risks may be quite substantial. Churches, employers, landlords and neighbors may all play roles that are not yet well understood. This section addresses only a few of the other settings affecting families: battered women's shelters, hospitals, and gun shops.

Battered Women's Shelters. The number of battered women's shelters in the US was recently estimated at 1,200 (Plichta, 1995, cited in Crowell and Burgess, 1996: 101). These shelters, and 600 other related programs, offer a wide array of services to families and women suffering intimate violence. The core of a shelter's service, however, is providing a safe haven during the high risk period in the immediate aftermath of a domestic violence incident (Farrell, 1995; Strang and Sherman, 1996). There is evidence that current levels of this service are insufficient to meet the demand; an estimated 300 women and children per week were turned away from New York City shelters in March of 1995 due to lack of space (O'Sullivan et al, 1995, as cited in Crowell and Burgess, 1996: 102).

Whether shelters actually reduce violence against women is an important question for evaluation. The logical basis for predicting that result is the reduction of risk after the passage of time with the offender unable to gain access to the victim. Berk et al (1986), however, found quasiexperimental (Scientific Methods Score = 4) evidence that unless the shelter clients took other steps to seek help beyond staying in the shelter, their rates of repeat violence after leaving the shelter were actually higher than a similar group who had not gone to a shelter. Among women who did take additional steps, however, the shelter

stay had a measured protection effect against repeat violence lasting about 6 weeks. The relatively small sample size (N = 155) and Santa Barbara (CA) site for this analysis (N = 155) may limit the generalizability of the findings, but the results suggest the clear need for impact evaluations of all crime prevention programs.

Hospitals. Little is known about the identification and reporting of family violence in hospitals. A recent NIJ grant to the Illinois Criminal Justice Information Authority will examine the possible data collection opportunities in hospital emergency rooms, which could lead to operational indicators as well as research findings. A clear interpretation of the number domestic violence cases reported to police is impossible as long as increased reports might reflect growing confidence in the police, rather than more violence in the home (Davis and Taylor, forthcoming; Sherman and Strang, 1996). Hospital measures over time may provide a community with its most reliable indicator of progress or decline in the effectiveness of its efforts to deal with the problem.

Gun Shops also play a crucial role in family violence, and most of some 2,000 domestic homicides a year. The 1996 Lautenberg Act imposed a federal ban on gun ownership among persons convicted of domestic violence misdemeanors. We may estimate the likely effect of implementing this law by noting that an estimated 100,000 to 150,000 persons are convicted annually of domestic violence misdemeanors.² Moreover, the risk of a domestic homicide is approximately eight times higher among people who have had police encounters for misdemeanor offenses than among people who have not in Milwaukee, and 18 times higher in Victoria (Melbourne), Australia (Strang and Sherman, 1996). While this risk is nonetheless a very low 1 in 33,000 person-years, it still amounts to 5 murders per year among people newly convicted of domestic violence. If the prior convictions were included for 20 years, that could amount to 100 murders per year committed by persons previously convicted of domestic violence misdemeanors. How many of those murders would be prevented by the Lautenberg law is impossible to predict. But the indirect evidence on risk factors suggests that the law does address a major risk factor for serious domestic injury and death.

² This calculation employs the FBI count of 1.86 million arrests for all assaults in 1995, less 75% for non-domestic assaults, adjusted by the arrest probability of 22% for domestic and 13% for non-domestic assaults observed in the Indiana University police observation study (Oppenlander, 1982), and multiplied by a conviction probability estimate of 20% given a domestic arrest (Sherman, 1992).

CONCLUSIONS: WHAT WORKS, WHAT DOESN'T, WHAT'S PROMISING

This section discusses the following conclusions, and their research and policy implications:

What Works

- o Long-term frequent home visitation combined with preschool prevents later delinquency
- o Infant weekly home visitation reduces child abuse and injuries
- o Family Therapy by clinical staff for delinquent and pre-delinquent youth

What Doesn't

- o Home visits by police after domestic violence incidents fails to reduce repeat violence

What's Promising

- o Battered women's shelters for women who take other steps to change their lives
- o Orders of Protection for battered women

The Effectiveness of DOJ-Funded Local Prevention Programs

Over the last three decades, the Congress has left family-based crime prevention largely in the hands of other federal agencies besides the Department of Justice (DOJ). This began to change with the rising concern over domestic violence in the 1980s³. The passage of the Violence Against Women Act (VAWA) as Title IV of the 1994 Crime Act was a major increase in the role of DOJ in the family (although the VAWA also addresses crimes committed by strangers). Most recently, the Office of Justice Programs has identified infant home visitation as an important strategy to include in comprehensive community prevention programs such as Weed and Seed and various OJJDP initiatives. The evidence suggests that DOJ's increasing responsibility for national crime rates logically draws it to the major risk factors for crime, which must clearly include the family.

In what may be a period of transition towards more explicit focus on family-based prevention, Congress has created a number of funding programs that offer opportunities to develop that role. These may be divided into developmental and family violence prevention. The developmental programs are funded primarily by OJJDP and the Executive Office of Weed and Seed with discretionary funds, while the family violence funding is concentrated in the Violence Against Women Grants Office.

Safe Kids, Safe Streets (OJJDP, with VAWGO and EOWS). This funding program will

³ Attorney General's Task Force on Family Violence, Report. 1984.

provide about \$1.4 million per year for five years to each of six communities. Informed by much of the research reviewed in this chapter, the program is specifically aimed at prevention of child abuse and neglect and related risk factors for delinquency. The strategies supported by the program include family strengthening, mental health services and treatment. A national process evaluation is underway to determine exactly what strategies each site selects, and a national impact evaluation is planned for future years.⁴ To the extent that the local grantees elect to employ approaches to family based prevention reviewed in this chapter, there is evidence that the funding can be effective in preventing crime. To the extent that the local grantees focus on the highest risk pre-adolescents in the highest-risk neighborhoods, however, the preliminary results from the Children at Risk Program may indicate that the state of the prevention art is not yet up to such a severe challenge (Harrell, 1996).

Title V Incentive Grants for Local Delinquency Prevention (OJJDP). This program distributed \$20 million in FY 1995 for local programs encouraged to adopt the Communities That Care model (Hawkins, et al, 1992). The program was initially developed and field tested by OJJDP in the early 1980s, and has established a substantial record of evaluation results. The CTC model recommends consideration of parent training as well as family therapy for high-risk adolescents and early childhood home-based and center-based strategies. This review finds all those approaches can be effective.⁵

Operation Weed and Seed (EOWS). This program is currently planning to conduct a field test of the Rochester University model of early infancy home nurse visitation. The location of such a test within Weed and Seed neighborhoods would provide an excellent replication of the original Elmira study. Results from the Memphis replication currently underway could also inform the Weed and Seed approach to this model, which has such strong evidence of reducing child abuse among high-risk rural white families.

Congressional Action on Universal Home Visitation. The evidence reviewed in this chapter suggests that substantial crime prevention effects could be obtained from greater federal investment in early infancy and pre-school home visitation. For reasons discussed in this chapter, a **universal** approach to such a program is more likely to succeed than a selective approach based upon risk factors. The latter approach is more cost-efficient but potentially stigmatizing. While further research is needed to compare the crime prevention benefits of early prevention to costly federal programs such as prison construction, such research could inform the Congress of where it can find the maximum crime prevention for each taxpayer dollar. While appropriations for Head Start have never been able to meet the demand for the program, that may reflect its use on a selective basis. A universal home

⁴ OJJDP Fact Sheet #38, June 1996.

⁵ OJJDP, 1995 Report to the Congress: Title V Incentive Grants for Local Delinquency Prevention Programs.

visitation program that promises to reduce crime may be more feasible than fully funding Head Start. Controlled testing of visitation with and without Head Start, however, is required in order to determine whether visitation alone can create lasting benefits without reinforcement for both parent and child through the pre-school environment.

Universal home visitation for children may also have the benefit of helping to prevent or at least detect domestic violence. Visitation has been found ineffective in the immediate aftermath of a police response. But it may well be effective at reducing unreported cases, especially in families where police are never called. While this would not be a central goal of universal early infancy visitation, it could be a side benefit. That hypothesis also provides a linkage between DOJ efforts to prevent crime developmentally and among members of the family.

STOP (Services, Training, Officers, Prosecutors) Formula Grants (VAWGO). By far the largest OJP expenditure on issues affecting crime in families is the STOP Grant funding program, which distributed \$23 million in fiscal 1995 and has been appropriated \$145 million for FY 1997.⁶ This money, which addresses all violence against women and not just family violence, is appropriated on the basis of population. How the money is used is up to the states, within the broad initial guidelines of 25% allocations to each of three areas (Burt, 1996: vi): law enforcement, prosecution, and victim services. Much of it appears to go for training, model policies, equipment, and other support materials.

To the extent that this funding can be effective in reducing family violence, it could be more so if the funds were allocated on the basis of some crime risk indicator. Possible criteria include the number of women murdered by men in each state, or total women murdered (which would have less reporting bias than other crimes against women like rape). Like police patrol funding (see Chapter Eight), the population based formula may put the money equally in places that need it desperately and places that do not.

As the major source of federal funds that could be used to combat family violence, STOP might provide a vehicle for increasing prosecution and adjudication of domestic violence arrests. The full enforcement hypothesis remains an unanswered question, even though there is clear evidence that it is not supported with certain kinds of offenders. In order to test the effects of higher levels of prosecution and sentencing, the funding required for the extra courtroom work must be provided. A review of the FY 1995 grant awards made by the States, however, suggests that the funds are not being used to support increased volume of court case processing--unlike the competitive Grants to Encourage Arrest Policies. Most of the purposes are for support services such as training. The effects of training of police and prosecutors on crime prevention have not yet been evaluated. But

⁶ This program is not just focused on families, but aims to prevent all forms of violence against women including stranger violence. Since most violence against women is caused by relatives and intimates, however, much of these funds are appropriately focused on family violence.

the effects of increased prosecution are also unknown. The general absence of scientific tests of most local practices in domestic violence prevention provides very little guidance to Congress, DOJ and the states on how this funding can be spent most effectively to prevent domestic violence.

Grants to Encourage Arrest Policies (VAWGO). A review of grant award abstracts for the FY 1996 grants suggests that these grants are supporting diverse local programs. The most direct operational activity is increased capacity for prosecution, with DOJ funds used to hire prosecutors and bring charges in cases that would otherwise be dropped. Some jurisdictions even commit to 100% prosecution. Thus the program may provide a realistic possibility in many communities to link arrest to a high certainty of prosecution, a response that has never been evaluated but which could be very different from arrest alone. Until evaluations of that kind are conducted, the effectiveness of increased prosecution as a crime prevention practice will remain unknown.

These grants also support training, data bases and other approaches designed to increase arrests made by police officers. Here again, the current state of evaluation science has little guidance to offer one way or another about any expenditures to encourage domestic violence arrests. The potential value for impact studies across a range of options for such programs would be to identify those which appear most cost-effective.

Rural Domestic Violence and Child Abuse Enforcement Assistance grants (VAWGO). The absence of scientific evidence on the effectiveness of local practices in rural areas, and with child abuse cases, also limits the assessment that can be made of this funding based on scientific evidence. The 1993 National Academy of Sciences Panel found the problem of child abuse to lack rudimentary science on many of these questions. To the extent that the Olds et al (1986) experiment prevented rural child abuse successfully, the Congress may wish to open the scope of acceptable funding for this program to include prevention as well as enforcement. Alternatively, the use of nurses legally obligated to report abuse might qualify as child abuse enforcement. If local programs funded by DOJ use their money in that fashion, it seems reasonably likely to be effective in rural white low-income communities or families.

National Stalker and Domestic Violence Reduction. This \$6 million three-year program establishes a data base as part of the National Crime Information Center that will cover various offenses and offenders in domestic and family violence and stalking. In addition to the data base funding from the STOP Block grants, these funds will help create the capacity for implementing the 1996 Lautenberg Act extending the Brady Bill to misdemeanor domestic violence. While the latter Act prohibits persons convicted of such misdemeanors from owning a gun, there is currently no data base available in most states to identify such persons. This gap results from the absence of special statutes for "domestic" offenses, which are generally prosecuted under generic laws against assault. Whether a misdemeanor assault conviction reflects domestic violence is not a part of the court record, and can only be determined retrospectively by examining police records. The latter are often kept in

paper files rather than computers, making the task very difficult in retrospect. But if new data bases can capture the data prospectively, it may be possible to implement the law with these funds by the 21st Century. It seems unlikely to happen without these DOJ funds.

No empirical test of the effect of a handgun ban for domestic violence misdemeanor has ever been conducted. Ongoing NIJ evaluations of the Brady bill may provide some idea. Other uses of the data bases created by VAWA funding could have even greater preventive effect, such as public access to a registry of convicted batterers. Such a registry could have a far greater deterrent effect than arrest alone, and could also help warn potential victims to avoid relationships with previously convicted batterers. Whether any of these hypothesized effects would occur, however, can only be determined by a program of rigorous research and development.

Office of Victims of Crime. This office, funded by fines collected by federal courts, provides grants in support of some of the local practices reviewed in this chapter. Support for battered women's shelters is a notable example. The potential value of these programs in preventing crime suggests that this Office might be included in the overall scope of DOJ crime prevention activity.

Improving Funding Effectiveness Through Better Evaluations

As the Congress recognized in its passage of the Violence Against Women Act of 1994, the research agenda for family-based crime prevention is substantial. A great many key questions about local practices remain unanswered, while tens of millions of cases are processed annually. This final section considers three high priority areas: home visitation, police arrest policies, and orders of protection.

Early Infancy Home Visitation. This Chapter's primary recommendation is the same as the 1993 Report of the National Research Council (1993) on Child Abuse and Neglect:

"Research on home visiting programs focused on the prenatal, postnatal, and toddler periods has great potential for enhancing family functioning and parental skills and reducing the prevalence of child maltreatment." (National Research Council, 1993: 191-92). "The panel recommends that evaluations of home visiting programs include descriptions of what goes on in visits..and direct observations of home visitors in action." (NRC 1993: 193).

The theoretically powerful early infancy visitation model raises a host of unanswered questions about its effectiveness. Before formulating or proposing a national policy, DOJ needs to procure randomized experiments testing the basic model under different conditions: high and low crime neighborhoods, different training for the visitors, different frequency and length of visitation, and different combinations of other interventions such as preschool with parental involvement. The funding of visitation programs as part of existing DOJ programs creates an opportunity to implement this proposal. The absence of a randomized

controlled trial, however, would gravely limit what can be learned from an impact evaluation. The feasibility of a rigorous experiment has been demonstrated in Elmira and Memphis, and DOJ can build upon that precedent.

Police Arrest Policies. Given the growing use of arrest for domestic violence and the continuing debate over the interpretation of the previous NIJ experiments, it would be very helpful to continue the program of research that produced them. Collaborative experiments with prosecutors and courts would seem to be the highest priority, to test the hypothesis that full enforcement by the criminal justice system is an effective prevention approach. Alternative sanctions, such as reintegrative shaming conferences (Braithwaite and Daly, 1993), also need to be tested against more customary measures like probation and fines. Even stigmatic shaming such as court-ordered display of bumper stickers or t-shirts proclaiming the offender to be a batterer (Kahan, 1997) could be tested against its theoretical competition in reintegrative shaming (Braithwaite, 1989). More sophisticated research designs can also now be employed to control for contextual effects of neighborhood labor force participation rates, rather than the less policy-relevant individual employment status.

Orders of Protection. Given the high risks of serious injury suffered by many domestic violence victims who receive orders of protection, the need for further research is great. The most theoretically promising strategy for further testing would be a randomized trial of the personal panic alarm in a big city jurisdiction. A large city would minimize the ethical problems with the creation of a control group, since there would be far too many victims for most jurisdictions to give them all a panic alarm. Randomized tests of women who volunteer for an evaluation of a randomized trial based upon informed consent may also lead to a strong test of orders of protection without any additional tools, which is by far the most common condition under which they are issued.

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Chapter 5

SCHOOL-BASED CRIME PREVENTION

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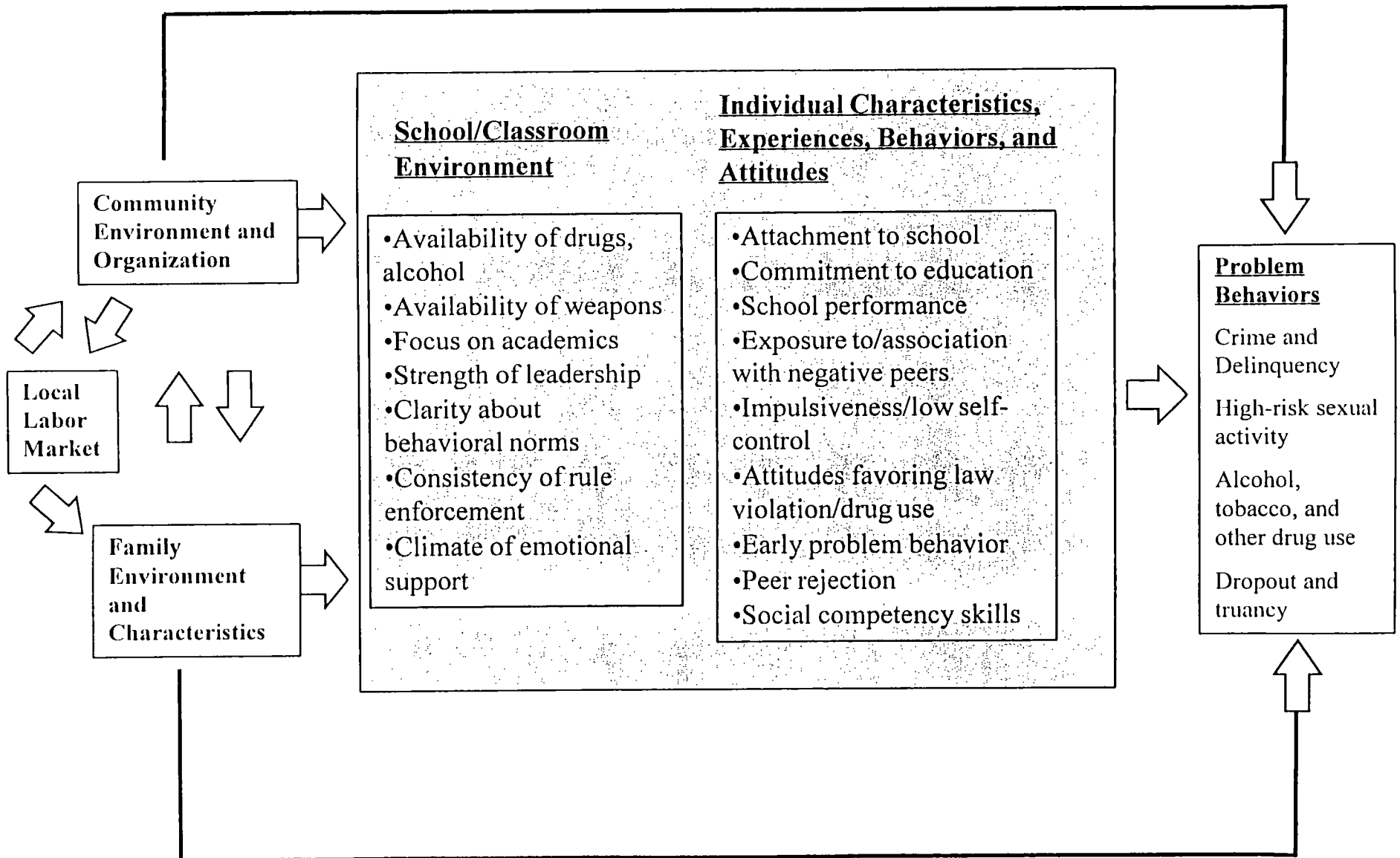
Schools have great potential as a locus for crime prevention. They provide regular access to students throughout the developmental years, and perhaps the only consistent access to large numbers of the most crime-prone young children in the early school years; they are staffed with individuals paid to help youth develop as healthy, happy, productive citizens; and the community usually supports schools' efforts to socialize youth. Many of the precursors of delinquent behavior are school-related and therefore likely to be amenable to change through school-based intervention.

Figure 5-1 shows several school-related precursors to delinquency identified by research. These factors include characteristics of school and classroom environments as well as individual-level school-related experiences and attitudes, peer group experiences, and personal values, attitudes, and beliefs. School environment factors related to delinquency include availability of drugs, alcohol, and other criminogenic commodities such as weapons; characteristics of the classroom and school social organization such as strong academic mission and administrative leadership; and a climate of emotional support. School-related experiences and attitudes which often precede delinquency include poor school performance and attendance, low attachment to school, and low commitment to schooling. Peer-related experiences, many of which are school-centered, include rejection by peers and association with delinquent peers. And individual factors include early problem behavior, impulsiveness or low levels of self-control, rebellious attitudes, beliefs favoring law violation, and low levels of social competency skills such as identifying likely consequences of actions and alternative solutions to problems, taking the perspective of others, and correctly interpreting social cues. Several recent reviews summarize the research literature linking these factors with crime (Gottfredson, Sealock, & Koper, 1996; Hawkins, Catalano, & Miller, 1992; Howell, Krisberg, Wilson & Hawkins, 1995).

Figure 5-1 also draws attention to fact that schools operate in larger contexts which influence their functioning as well as their outcomes. By far the strongest correlates of school disorder are characteristics of the population and community contexts in which schools are located. Schools in urban, poor, disorganized communities experience more disorder than other schools (Gottfredson & Gottfredson, 1985). Research has also demonstrated that the human resources needed to implement and sustain school improvement efforts -- leadership, teacher morale, teacher mastery, school climate, and resources -- are found less often in urban than in

¹ The editorial assistance of Roger Weissberg and the research assistance of Todd Armstrong, Veronica Puryear, John Ridgely, Stacy Skroban, and Shannon Womer are gratefully acknowledged.

Figure 5-1: School-Related Predictors of Problem Behavior



other schools (Gottfredson, Fink, Skroban, and Gottfredson, in press). It is precisely those schools whose populations are most in need of prevention and intervention services that are least able to provide those services. Although schools can not be expected to reverse their communities' problems, they can influence their own rates of disorder. Controlling on relevant characteristics of the larger community, characteristics of schools and the way they are run explain significant amounts of variation in school rates of disorderly behavior (Gottfredson & Gottfredson, 1985).

National priorities for children focus on schools as a locus for the prevention of diverse social problems including crime. The Department of Health and Human Services' Healthy People 2000 goals include increasing high school graduation rates and reducing physical fighting, weapon-carrying, substance use, and pregnancy among adolescents. National Education Goal 6 states that every school will be free of drugs, violence, and the unauthorized presence of firearms and alcohol, and will offer a disciplined environment conducive to learning by the year 2000. The 1986 Drug-Free Schools and Communities Act legislation provided substantial funds to states to develop and operate school-based drug prevention programs. In 1994 this legislation was modified to authorize expenditures on school-based violence prevention programs as well.

This substantial national interest in schools as a prevention tool is not matched by federal expenditures in this area. Table 5-1 shows that federal expenditures on school-based substance abuse and crime prevention efforts are modest,² particularly when compared with federal expenditures on control strategies such as policing and prison construction.³ Perhaps more troubling, the meager federal expenditures on school-based prevention are not well spent. The single largest federal expenditure on school-based prevention (Safe and Drug-Free Schools and Communities monies administered by the U.S. Department of Education) funds a relatively narrow range of intervention strategies, many of which have been shown either not to work (e.g.,

² Of course, more money is spent on maintaining basic educational services. The largest proportion of spending for children and youth in all states is tied to schools (Holmes, Gottfredson, & Miller, 1992) -- mostly to maintain basic education processes. An argument can be made for counting these large basic education expenditures as prevention expenditures because they are directed at improving the social capital of the citizenry (e.g., education and proper conduct) which protects youths from later involvement in a variety of problem behaviors. Because the evidence for a connection between basic education programs and practices and crime is largely indirect, such basic education functions will be given short shrift in this chapter. Researchers and policy-makers should devote more attention, however, to understanding the crime prevention potential of large federal entitlement programs such as Chapter I of Title I of the Elementary and Secondary Education Act, which distributes approximately \$6.7 billion in federal funds to local school districts to enhance basic educational processes.

³ OJP spends approximately \$1.4 billion on extra policing programs and \$617 million on prison construction projects per year.

Table 5-1. Partial List of Federal Expenditures on School-based Prevention

Federal Program	Agency	Funding level	Strategies
Safe and Drug-Free Schools & Communities Program Note: Prior to 1994, this program funded drug programs in schools. The 1994 legislation authorized expenditures on violence prevention programs and curricula as well.	DOE	FY95: 466.98M	State and local education agency programs: instruction, student assistance programs, teachers and staff training, curriculum development and acquisition; red-ribbon week; before-after-school programs and community service. Governor's state and local programs: Instruction (D.A.R.E.), replication of other drug education programs, high-risk youth programs
High-Risk Youth Demonstration Program	DHHS [CSAP]	FY95: 65.2M	Various. In-school and after-school programs; violence and drug prevention.
Youth Violence Prevention Program	DHHS [CDC]	FY95: 10.7M	Various. Projects include instruction (violence prevention, self-control, social competency; cognitive behavioral methods, tutoring, mentoring, recreation, campaigns to change norms, peer mediation and conflict resolution, changes in school management processes, parent training)
Community Schools Youth Services and Supervision Program	DHHS [Administration for Children, Youth, & Families]	FY95: 10M	Various. Prevention and academic achievement enhancement during the non-school hours.
Learn & Serve America Program	Corporation for National Service	FY95: 32M FY96: 32M	Community service tied to the school curriculum. Attempt to engage youths in school to prevent dropout. Character education.

Federal Program	Agency	Funding level	Strategies
D.A.R.E. (Drug Abuse Resistance Education)	DOJ/DOJ [BJA] DOE	FY95: 1.75M FY96: 1.75M (To D.A.R.E. America) Plus annual funds from Byrne Block Grant Plus approx. 10M annually through Safe and Drug Free Schools program	Instruction (core program and booster lessons); A recent extension of the program (D.A.R.E. + PLUS; Play and Learn under Supervision) also includes an after-school program.
G.R.E.A.T. (Gang Resistance Education and Training)	DOJ/ TREAS [ATF/NIJ]	FY95: 16.2M Plus 265K (eval)	Instruction
C.I.S. (Cities in Schools)	DOJ [OJJDP]	FY95: 592K FY96: 340K	School-based supportive services for at-risk students and their families
JUMP (Juvenile Mentoring Program)	DOJ [OJJDP]	FY96: 15M	Mentoring
L.R.E. (Law-related education)	DOJ [OJJDP]	FY95: 2.7M FY96: 1.2M	Instruction, character education

Note: M=million; K=thousand

counseling) or to have only small effects (e.g., drug instruction). School-based prevention monies administered by OJP also fail to capitalize on the full range of empirically-tested, effective strategies.

This chapter is intended to provide information for use in setting federal research agendas and guiding funding decisions about what works, what does not work, what is promising, and how delinquency prevention efforts can be strengthened. It begins by clarifying the outcomes sought in school-based prevention programs. It then classifies school-based prevention activities within two broad approaches -- environmental and individual-focused -- into more specific program types. Next it reviews research related to each type of activity, comments on the quality of the available information about the efficacy of each type of activity, and summarizes knowledge about what works, what does not work, and what is promising. It ends with a summary of findings and recommendations for OJP funding of school-based prevention interventions and further research.

The Nature of School-Based Prevention

Measures of effectiveness. School-based prevention programs include interventions to prevent a variety of forms of “problem behavior,” including theft, violence, illegal acts of aggression, alcohol or other drug use, rebellious behavior, anti-social behavior, aggressive behavior, defiance of authority, and disrespect for others. These different forms of delinquent behavior are highly correlated and share common causes. Many of the programs considered in this chapter were not specifically designed to prevent the problem behaviors, but instead to affect presumed causal factors such as school drop-out, truancy, or other correlates which are expected to increase protection against or decrease risk towards engaging in problem behaviors at some later date. This focus on non-crime program outcomes is entirely appropriate given the young ages of many of the targeted students. Different outcomes have different salencies for different age groups. Positive program effects on reading skills for six-year-olds may be as important in terms of later crime prevented as reducing marijuana use for sixteen-year-olds. Many prevention researchers and practitioners also assume a link between less serious problem behaviors and later more serious crime. They are satisfied when their interventions demonstrate effects on the early forms of problem behavior. This developmental perspective underlies many school-based prevention efforts today and may explain the wide variety of outcome measures used to assess the effectiveness of these programs, some of which are summarized in Figure 5-2.

Studies of the effects of school-based prevention on serious violent crime are rare. Of the 149 studies examined for this review, only 9 measured program outcomes on murder, rape, robbery or aggravated assault. Only 15 measured outcomes on serious property crimes such as burglary, larceny-theft, and motor vehicle theft. More (25) measured less serious or unspecified criminal behavior. Far more common are studies assessing program effects on alcohol, tobacco, or other drug use (77 studies) and other less serious forms of rebellious, anti-social, aggressive, or defiant behaviors (79 studies). Most studies measure the risk or protective factors directly targeted by the program (e.g., academic achievement, social competency skills).

Alcohol and other drug use: Ingestion of alcoholic beverages and ingestion of any illicit drug are considered substance abuse. Dimensions of use that are often measured distinctly in evaluations of prevention programs include age of first use (age at onset); status as having used alcohol or another drugs at least once; and current use, including frequency of use and amount typically used. Substance use is most often measured using youth self-reports in evaluations of school-based prevention programs.

Delinquent and criminal behavior: Delinquent or criminal behavior is any behavior which is against the law. Delinquency is criminal behavior committed by a young person. Laws, and therefore the precise definition of behaviors in violation of the law, vary slightly from state to state. Crime and delinquency includes the full range of acts for which individuals could be arrested. It includes crimes against persons ranging in seriousness from murder to robbery to minor assault. It includes an array of crimes against property ranging from arson to felony theft to joyriding. Crime and delinquency also includes possession, use, and selling of drugs. For juveniles, it includes status offenses such as running away. Dimensions of crime that are often measured distinctly in evaluations include age of first involvement, status as a delinquent ever in one's life, current criminal activity, and frequency of delinquent involvement. Delinquency is more often measured using youth self-reports than official records of arrest or conviction in evaluations of school-based prevention programs.

Withdrawal from school: Leaving school prior to graduation from the 12th grade and truancy are often used as measures of success in prevention programs. The precise definition of truancy differs according to location. For practical purposes it is often measured as the number of days absent from school.

Conduct problems, low self-control, aggression: These characteristics are so highly related to delinquent behavior that they may be considered proxies for it. Studies of school-based prevention often measure these characteristics in addition to or in lieu of actual delinquent behavior because (1) the subjects are too young to have initiated delinquent behavior, (2) the questions are less controversial because they are not self-incriminating, or (3) teachers and parents are more able to rate youth on these characteristics than on actual delinquent behavior, which is often covert. Conduct problem behavior subsumes a variety of behaviors: defiance, disrespect, rebelliousness, hitting, stealing, lying, fighting, talking back to persons in authority, etc. Low self control is a disposition to behave impulsively, and aggression involves committing acts of hostility and violating the rights of others.

Risk and protective factors: As noted in the text, the effectiveness of prevention programs is often assessed by examining program effects of a variety of factors which are known to elevate or reduce risk for delinquent involvement at a later date. These factors are discussed above and shown in Figure 1.

Figure 5-2: Common Outcome Measures for School-based Prevention Programs

Because Congress has asked for a review of scientific literature on crime prevention, studies including evaluations on crime, delinquency, alcohol or other drug use, or other forms of antisocial behavior are highlighted. Studies with demonstrated effects on risk and protective factors related to delinquency are also mentioned. Many substance abuse prevention programs are summarized in the chapter because substance use is one aspect of the adolescent problem behavior syndrome, is itself a form of criminal behavior for adolescents, and is highly correlated with more serious forms of criminal behavior. A distinction between substance use (including alcohol, marijuana, and harder drug use) and all other forms of delinquency is maintained throughout the report. Programs are considered to influence substance use or delinquent behavior if their evaluations demonstrate effects on any measure of each outcome, regardless of its type or seriousness level.

Categories of school-based prevention. Programs included in this chapter are located primarily in school buildings (even if outside of school hours) or are implemented by school staff or under school or school system auspices. Programs targeting all grade levels -- kindergarten, elementary, and secondary -- are included. Excluded from this chapter are school-based programs intended to alter family conditions or practices (these are covered in the family chapter), and school-based attempts to secure the school boundaries from intruders, weapons, and drugs. These are considered in the chapter on place-based strategies.

Figure 5-3 describes four categories of school-based prevention focusing on altering school or classroom environments and Figure 5-4 describes five categories of school-based prevention focusing on changing the behaviors, knowledge, skills, attitudes, or beliefs of individual students. Classifying any particular school-based prevention activity is a difficult task because most school-based prevention programs contain a mix of different types of activities. In the 149 studies examined for this review, most (94%) contained multiple components (i.e., components falling into more than one of the major categories of program activity shown in the figures). About 40% of the studies contained components in four or more different categories. Table 5-2 shows the major types of activities and the percentage of studies whose evaluated programs contained each type of activity. It shows that the school-based programs described in most studies include an instructional component and a component intended to alter classroom management strategies. These common strategies are often combined with attempts to teach students new ways of thinking and dealing with potential social problems. Other fairly common approaches in these studies are behavior modification and attempts to change the normative climate of the school.

The multi-component strategy found in most studies of school-based prevention is perfectly reasonable given the nested nature of the schooling experience and the multiple routes to problem behavior. Student behavior is most directly influenced by the attitudes, beliefs, and characteristics of the student and his or her peers. Individually-targeted interventions such as instructional or behavior modification techniques that teach students new ways of thinking and acting may be effective in changing these individual factors. But *several* of these individual factors (e.g., low self-control, academic failure experiences, and attitudes favorable to drug use) are likely causes of problem behavior and are best targeted through a set of inter-related program components rather than through a single intervention. Moreover, students interact in the context of classrooms, each of which has its own normative climate encouraging or discouraging certain behaviors. And classrooms exist in school environments which establish larger contexts for all activities in the school. An instructional program teaching students to resolve conflicts non-violently is not likely to be as effective for reducing violence in a school or classroom setting in which fights are regularly ignored as in one which immediately responds to such incidents. The interconnections among different prevention components and the interdependence of different contexts should be considered in the design of prevention programs (Elias, Weissberg, et al., 1994).

Most recent reviews of school-based prevention are organized by developmental level

(e.g., elementary, junior high, senior high) rather than by program type. Despite the difficulties inherent in classifying prevention activities, it is nevertheless a useful activity because only by decomposing different sets of activities into their major parts can we (a) describe the activities; (b) describe how the mix of activities varies across location (e.g., urban, suburban, rural) and developmental level; and (c) design evaluations of specific constellations of components. Also, several evaluations of relatively narrow programs are available and can provide information about the potential of each activity as a piece of a larger, more potent, prevention strategy. Ongoing research jointly sponsored by the Bureau of Justice Assistance and National Institute of Justice will cross-classify program types by developmental level and school location to provide a more comprehensive picture of which school-based prevention activities are used in which locations for which grade levels.

Environmental Change Strategies

Building School Capacity: Interventions to change the decision-making processes or authority structures to enhance the general capacity of the school. These interventions often involve teams of staff and (sometimes) parents, students, and community members engaged in planning and carrying out activities to improve the school. They often diagnose school problems, formulate school goals and objectives, design potential solutions, monitor progress, and evaluate the efforts. Activities aimed at enhancing the administrative capability of the school by increasing communication and cooperation among members of the school community are also included.

Setting Norms for Behavior, Rule-Setting: School-wide efforts to redefine norms for behavior and signal appropriate behavior through the use of rules. It includes activities such as newsletters, posters, ceremonies during which students declare their intention to remain drug-free, and displaying symbols of appropriate behavior. Some well-known interventions in this category are "red ribbon week" sponsored through the Department of Education's Safe and Drug-Free Schools and Communities program and school-wide campaigns against bullying. The category also includes efforts to establish or clarify school rules or discipline codes and mechanisms for the enforcement of school rules.

Managing Classes: Using instructional methods designed to increase student engagement in the learning process and hence increase their academic performance and bonding to the school (e.g., cooperative learning techniques and "experiential learning" strategies); and classroom organization and management strategies. The latter include activities to establish and enforce classroom rules, uses of rewards and punishments, management of time to reduce "down-time," strategies for grouping students within the class, and use of external resources such as parent volunteers, police officers, or professional consultants as instructors or aides.

Regrouping Students: Reorganizing classes or grades to create smaller units, continuing interaction, or different mixes of students, or to provide greater flexibility in instruction. It includes changes to school schedule (e.g., block scheduling, scheduling more periods in the day, changes in the lengths of instructional periods); adoption of schools-within-schools or similar arrangements; tracking into classes by ability, achievement, effort, or conduct; formation of grade level "houses" or "teams;" and decreasing class size. Alternative schools for disruptive youths are also included in this category.

Figure 5-3: Environmental Change Strategies for School-Based Prevention

Individual-Change Strategies: **Strategies to Change Student Knowledge, Skills, Attitudes, Beliefs, or Behaviors**

Instructing Students: The most common strategy used in schools. These interventions provide instruction to students to teach them factual information, increase their awareness of social influences to engage in misbehavior, expand their repertoires for recognizing and appropriately responding to risky or potentially harmful situations, increase their appreciation for diversity in society, improve their moral character, etc. Well-known examples include Drug Abuse Resistance Education (D.A.R.E.), Law-related Education (L.R.E.), and Gang Resistance Education and Training (G.R.E.A.T.).

Behavior Modification and Teaching Thinking Strategies: Behavior modification strategies focus directly on changing behaviors and involve timely tracking of specific behaviors over time, behavioral goals, and uses feedback or positive or negative reinforcement to change behavior. These strategies rely on reinforcers external to the student to shape student behavior. Larger or more robust effects on behavior might be obtained by teaching students to modify their own behavior using a range of cognitive strategies research has found lacking in delinquent youth. Efforts to teach students "thinking strategies" (known in the scientific literature as cognitive-behavioral strategies) involve modeling or demonstrating behaviors and providing rehearsal and coaching in the display of new skills. Students are taught, for example, to recognize the physiological cues experienced in risky situations. They rehearse this skill and practice stopping rather than acting impulsively in such situations. Students are taught and rehearsed in such skills as suggesting alternative activities when friends propose engaging in a risky activity. And they are taught to use prompts or cues to remember to engage in behavior.

Peer Programs: Peer counseling, peer mediation, and programs involving peer leaders.

Other Counseling and Mentoring: Individual counseling and case management and similar group-based interventions, excluding peer counseling. Counseling is distinguished from mentoring, which is generally provided by a lay person rather than a trained counselor is not necessarily guided by a structured approach.

Providing Recreational, Enrichment, and Leisure Activities: Activities intended to provide constructive and fun alternatives to delinquent behavior. Drop-in recreation centers, after-school and week-end programs, dances, community service activities, and other events are offered in these programs as alternatives to the more dangerous activities. The popular "Midnight Basketball" is included here.

Figure 5-4: Individual-Change Strategies for School-Based Prevention

Table 5-2. Percentage Studies Including Each Intervention Strategy

Program Strategy	Percentage Studies Including
Instructing Students	78
Managing Classrooms	66
Teaching Thinking Strategies	49
Setting Norms for Behavior, Rule-Setting	33
Behavioral Modification	27
Peer Counseling, mediation, and leaders	16
Counseling	14
Providing Recreational, Enrichment, and Leisure Activities	10
Building School Capacity	10
Regrouping Students	5
Mentoring	3

Methods

Search and summary methods used in this chapter are described in more detail in the methods appendix. Briefly, a library search was conducted to locate all published studies of school-based prevention programs. This list was augmented with additional studies cited in recent reviews of prevention programs. In all, 149 studies were located and classified into the program categories described above. Studies of multi-component programs were assigned to the category which best described the program. For categories containing a manageable number of studies, all studies were coded for methodological rigor and effect sizes were computed⁴ (when possible) for measures of delinquency and substance use. For categories containing more studies than could be coded in the short time available to produce this report, recent high-quality secondary reviews were summarized and two or three of the most rigorous studies were coded using the same procedures as for the smaller categories.

The following paragraphs discuss in more detail three issues specific to this chapter.

Effect sizes. Program effects are expressed whenever possible in this chapter as "effect sizes" (ES), a measure of change due to the treatment as a proportion of the standard deviation for each measure employed. ESs usually range from -1 (indicating that the treatment group performed one standard deviation lower than the comparison group) to +1 (indicating that the treatment group performed one standard deviation higher than the comparison group). Rosenthal and Rubin (1982) show that ESs can be translated for ease of interpretation into the equivalent of percentage differences by simply dividing the ES by 2 and multiplying by 100. The resulting figure represents the relative percentage difference in success (or failure) rates between the experimental and control groups. For example, an ES of .5 might indicate that the success rate for the treatment group is 25 percentage points above that of the comparison group. Lipsey & Wilson (1993), summarizing effect sizes from 156 reviews of 9,400 interventions in the social and behavioral sciences and education, reported an average effect size of .47 (SD=.28) for many different types of programs and many different outcomes. By comparison, Lipsey (1992) showed the average effect size in 397 studies of delinquency treatment and prevention was .17 (SD=.44). Delinquent behavior appears more difficult to change than more conventional behaviors. The practical significance of an effect size depends largely on the seriousness of the outcome for the population. Lipsey argues that even small ESs (e.g., .10) for serious crime have practical

⁴ Code sheets used to code methodological rigor and gather information for the computation of effect sizes are shown in the methods appendix. All coding was done by two trained graduate students. All discrepancies were discussed and resolved. Seven aspects of the methods used in each study were rated to arrive at an overall rating of methodological rigor ranging from "1" (for studies having no controls for plausible alternative explanations for observed effects, insufficient power to detect program effects, or inadequate measurement of key outcome variables) to "5" (for studies employing random assignment to treatment and control conditions, sufficient power, and reliable and valid measurement).

significance.

Level of analysis. Most studies of school-based prevention share a methodological shortcoming: Data that should be analyzed at the classroom or school level are instead analyzed at the individual level. School-based prevention programs are usually administered to intact classrooms or schools and these larger units are usually assigned to treatment and control conditions. But most studies, conducted with limited funding, involve relatively small numbers of classes or schools. The largest study reviewed in this chapter involved only 56 schools, and most involve fewer than 10. Investigators usually analyze their data as though individuals were assigned to treatment and comparison conditions. Resulting estimates of the effects of school-based prevention practices are imprecise. Corrections are seldom or never made for the correlated error terms that result when observations are clustered in larger units. Effect sizes are usually underestimated because they use the larger individual-level standard deviation estimates rather than the smaller standard error estimates for classrooms or schools. This shortcoming can be corrected in future studies only with increased funding for studies to allow for larger numbers of schools and classrooms.

Scientific vs. programmatic rigor. The scientific rigor of studies summarized in this chapter was classified using the coding scheme described in the methods appendix. The programmatic rigor of prevention programs is not as easily quantified because the same level of consensus does not exist about the elements of programmatic rigor. We can be reasonably certain, however, that longer-term, multi-component strategies located in natural school settings, using staff readily available to the schools, employing methods that are acceptable to regular school staff are most likely to produce the strongest and most durable effects. A conundrum for school-based prevention research is that such rigorous programs are the most difficult to study using rigorous methods. Long-term interventions are more likely to suffer from attrition problems. In natural setting it is not always possible to randomly assign subjects to treatment and control conditions, thus lowering confidence in the interpretation of any differences observed as due to the effects of the intervention. The most rigorous programs, therefore, are usually not studied with the highest level of scientific rigor.

Studies of School-based Prevention

The Office of Juvenile Justice and Delinquency Prevention (OJJDP) launched a large-scale school-based demonstration project in the early 1980s, funding eighteen different school-based delinquency prevention models in fifteen cities. Program models ran the gamut from alternative schools employing behavior modification for high-risk youths, to counseling classes, to enhancing management processes in schools. Seventeen of the projects were included in the national evaluation of the initiative, also funded by OJJDP. Gottfredson (1987), summarizing the evaluation, concluded that the initiative was successful in demonstrating that some school-based preventive interventions reduce delinquency. Schools in the initiative became significantly safer and less disruptive over the course of the initiative. The initiative as a whole demonstrated that

school-based prevention can work, but evaluations of specific program models showed great variability in their effectiveness. Reports on many of the specific program models included in the initiative have made their way into the scientific research literature and will be summarized at appropriate points later in this chapter.

Changing School and Classroom Environments

Correlational evidence suggests that the way schools are run predicts the level of disorder they experience. Schools in which the administration and faculty communicate and work together to plan for change and solve problems have higher teacher morale and less disorder. These schools can presumably absorb change. Schools in which students notice clear school rules and reward structures and unambiguous sanctions also experience less disorder. These schools are likely to signal appropriate behavior for students (Corcoran, 1985; Gottfredson, 1987; Gottfredson & Gottfredson, 1985; Gottfredson, Gottfredson, & Hybl, 1993). Schools in which students feel as though they belong and that people in the school care about them also experience less disorder (Duke, 1989). These schools are probably better at controlling behavior informally. Intervention studies have tested for a causal association between each of these factors and delinquency or substance use among students. Four major strategies for changing school and classroom environments are summarized below: (1) building school capacity to manage itself; (2) setting norms or expectations for behavior and establishing and enforcing school rules, policies, or regulations; (3) changing classroom instructional and management practices to enhance classroom climate or improve educational processes; and (4) grouping students in different ways to achieve smaller, less alienating, or otherwise more suitable micro-climates within the school.

Building School Capacity

Program Development Evaluation (PDE; G. Gottfredson, 1984a; Gottfredson, Rickert, Gottfredson, and Advani, 1984) is a structured organizational development method developed to help organizations plan, initiate, and sustain needed changes. Researchers and practitioners collaborate, using specific steps spelled out in the program materials, to develop and implement programs. A spiral of improvement is created as researchers continuously provide data feedback during the implementation phase to the practitioners and work with them to identify and overcome obstacles to strong program implementation. The method -- first developed for use with schools participating in the OJJDP alternative education initiative -- was intended to solve the problem that evaluations up until that time had found few efficacious delinquency prevention models. The developer assumed that the poor showing was due to weak evaluations, failure to inform program design with research knowledge and social science theory, and weak program implementation.

PDE was used in a comprehensive school improvement intervention -- project PATHE -- that altered the organization and management structures in seven secondary schools between 1981 and 1983 as part of OJJDP's alternative education initiative (D. Gottfredson, 1986; scientific methods score=4). District-level administrators used PDE to develop a general plan for

all seven schools, and then used PDE to structure specific school-level planning interventions. These efforts increased staff and student participation in planning for and implementing school improvement efforts. Changes resulting from the planning activity included efforts to increase clarity of rules and consistency of rule enforcement and activities to increase students' success experiences and feelings of belonging. These activities targeted the entire population in each school.

The evaluation of the project compared change on an array of measures from the year prior to the treatment to one year (for four high schools)⁵ and two years (for five middle schools) into the intervention. One school at each level was a comparison school selected from among the non-participating schools to match the treatment schools as closely as possible. The students in the participating high schools reported significantly less delinquent behavior⁶ ($ES = -.16$) and drug use ($ES = -.19$), had fewer suspensions ($ES = -.27$), and fewer school punishments ($ES = -.18$) after the first year of the program. Students in the comparison high school did not change significantly on these outcomes. A similar pattern was observed for the middle schools after two years. As serious delinquency increased significantly in the comparison school, it decreased (nonsignificantly) in the program middle schools ($ES = -.27$). Changes in drug use ($ES = -.13$) and school punishments ($ES = -.15$) also favored the program schools. Suspensions also declined significantly in the program middle schools, but a similar decline was observed in the comparison school. Several indicators of the school climate directly targeted by the program (e.g., safety, staff morale, clarity of school rules, and effectiveness of the school administration) also increased in the program schools, with effect sizes ranging from .16 to .63.

D. Gottfredson (1987; scientific methods score=4) reported the results of a similar effort - The Effective Schools Project -- in a difficult Baltimore City junior high school. PDE was used with a team of school and district-level educators to plan and implement changes to instructional and discipline practices. School-wide and classroom-level changes were made to the disciplinary procedures to increase the clarity and consistency of rule enforcement, and to substitute positive reinforcement strategies for strategies that relied solely on punishment. Instructional innovations including cooperative learning and frequent monitoring of class work and homework were put in place, an expanded extracurricular activities program was added, and a career exploration program which exposed youth to positive role models in the community, took them on career-related field trips, and provided instruction on career-related topics was undertaken.

The evaluation of the project involved a comparison of pre-treatment measures to post-treatment measures taken two years later for the one treatment school and a second school which

⁵ A district consolidation of high schools prevented continued evaluation at the high school level.

⁶ Effect sizes reported here are the effect sizes for treatment school change from pre-intervention to post-intervention reported in the original report minus the same effect sizes reported for the comparison schools.

was intended to receive the program but instead chose to develop a school improvement plan with minimal assistance from the researchers (and without using the PDE method). Indicators of organizational health (e.g., staff morale, cooperation and collaboration between faculty and administration, and staff involvement in planning and action for school improvement) improved dramatically in the treatment school. Only the Planning & Action scale improved in the comparison school. Significant reductions from pre- to post-treatment on delinquency (see footnote 3, $ES = -.33$) and increases in classroom orderliness ($ES = .57$) were observed for the treatment school. A reduction in student reports of rebellious behavior in the treatment school was observed (not significant) while a significant increase was observed in the comparison school ($ES = -.22$).

Kenney & Watson (1996; scientific methods score = 3) report on an intervention to empower students to improve safety in schools. This study, funded by NIJ in 1993, involved 11th grade students (N 's range from 372 to 451) in the application of a problem-solving technique to reduce problems of crime, disorder, and fear on the school campus. As part of their government and history class, students implemented a four-step problem-solving method commonly used in problem-oriented policing interventions to identify problems, analyze possible solutions, formulate and implement a strategy, and evaluate the outcomes of the intervention. The investigators anticipated that empowering students to serve as change agents in the school would produce safer schools. Among the problems selected by the students to work on were streamlining lunch-room procedures and monitoring the restrooms. These place-oriented strategies are discussed in Eck's chapter in this volume.

Baseline surveys used by the planning groups to identify school problems were used also as baseline measures for the evaluation of the project. Change over a two-year period was examined for the treatment and one comparison school. The study found that students in the treatment school reported significantly less fighting and less teacher victimization and were less fearful about being in certain places in the school at the end of the two-year period compared with their baseline. Students in the comparison school did not change on these outcomes. A few of the items measuring teacher fear and victimization experiences were significantly lower at the end of the program, but positive effects were more evident in student than on teacher reports. The positive findings for this program on measures of fighting, fear, and victimization experiences are consistent with the Gottfredson et. al. research showing that building school capacity for initiating and sustaining change reduce delinquency and drug use. All three studies were of acceptable methodological rigor, with scientific methods scores of 3 or 4. The size of the effects on delinquency and substance use ranged from small ($-.13$) to moderate ($-.33$), with larger effects (up to $.57$) observed for less serious forms of misbehavior.

Norms for Behavior and Rule-Setting

Research on the correlates of school disorder summarized earlier in this chapter suggests that a constellation of discipline management-related variables -- clarity about behavioral norms, predictability, consistency and fairness in applying consequences for behaviors -- are inversely

related to rates of teacher and student victimization in schools. Several studies have attempted to intervene in schools to increase the clarity and consistency of rule enforcement. Others have deliberately involved students in the development and enforcement of the rules in an attempt to increase the perceived validity and fairness of the rules. Still others have attempted to establish or change school norms using campaigns, ceremonies, or similar techniques.

Gottfredson, Gottfredson, & Hybl (1993; scientific methods score=4) tested a discipline management intervention in six urban middle schools. This program (BASIS) included the following components:

- Increasing clarity of school rules and consistency of rule enforcement through revisions to the school rules and a computerized behavior tracking system;
- Improving classroom organization and management through teacher training;
- Increasing the frequency of communication with the home regarding student behavior through systems to identify good student behavior and a computerized system to generate letters to the home regarding both positive and negative behavior; and
- Replacing punitive disciplinary strategies with positive reinforcement of appropriate behavior through a variety of school- and classroom-level positive reinforcement strategies.

School teams of administrators, teachers, and other school personnel were responsible for implementing the program. When all six participating schools were compared with the two non-randomly selected comparison schools, significant changes in the expected direction were observed from the beginning to the end of the program on the measures most directly targeted: classroom orderliness, classroom organization, classroom rule clarity, and fairness of school rules. Student reports of rebellious behavior, a scale measuring minor delinquent acts, increased significantly over the three year time frame for students in both treatment and comparison schools, and slightly more so in treatment schools ($ES=.27$) than in the comparison schools ($ES=.19$). This increase was probably due to the county-wide aging of the middle school student population which resulted when the implementation of higher grade-to-grade promotion standards resulted in a huge increase in grade retentions. Implementation data showed that the components of the program were implemented with high fidelity to the original design in only three of the six program schools. In these three schools, teachers reports of student attention to academic work increased significantly ($ES=.09$) and their ratings of student classroom disruption decreased significantly ($ES=-.12$). The increase in rebellious behavior was smallest ($ES=.11$) in the these schools, although the difference between these “high implementation” treatment schools and the control schools was small (difference in $ES=.08$).

In another three-year discipline management study implemented in nine schools, Mayer, Butterworth, Nafpaktitus, & Sulzer-Azaroff (1983; scientific methods score=5) demonstrated positive effects for a program that trained teams of school personnel to use behavioral strategies for reducing student vandalism and disruption. Each team also met regularly to plan and

implement programs on a school-wide basis that would teach students alternative behavior to vandalism and disruption. These included lunch-room and playground management programs and classroom management programs that stressed the use of specific positive reinforcement. Graduate student consultants worked with each teacher about twice per week and conducted about two team meetings per month during the school year. The study showed that rates of student off-task behavior decreased significantly and vandalism costs plummeted in the project schools. These results replicated results from an earlier pilot study (Mayer & Butterworth, 1978; scientific methods score=4). Note that the school team approach used in this study resembles that used in the PDE method described above.

An impressive program of research on an intervention designed to limit conflict in schools undertaken in Norway (Olweus, 1991, 1992; Olweus & Alsaker, 1991; scientific methods score=3) suggests that school-wide efforts to redefine norms for behavior reduce delinquency. Olweus noted that certain adolescents -- "bullies" -- repeatedly victimized other adolescents. This harassment was usually ignored by adults who failed to actively intervene and thus provided tacit acceptance of the bullying. A program was devised to alter environmental norms regarding bullying. A campaign directed communication to redefining the behavior as wrong. A booklet was directed to school personnel, defining the problem and spelling out ways to counteract it. Parents were sent a booklet of advice. A video illustrating the problem was made available. Surveys to collect information and register the level of the problem were fielded. Information was fed back to personnel in 42 schools in Bergen, Norway. Among the recommended strategies to reduce bullying were: establishing clear class rules against bullying; contingent responses (praise and sanctions); regular class meetings to clarify norms against bullying; improved supervision of the playground; and teacher involvement in the development of a positive school climate.

The program was evaluated using data from approximately 2,500 students (aged 11 to 14) belonging to 112 classes in 42 primary and secondary schools in Bergen. The results indicated that bullying decreased by 50 percent (exact ESs can not be computed from the information provided in the published reports, but they appear to range from approximately -.10 to -.50 for different grade levels, genders, and measures of bullying). Program effects were also observed on self-reports of delinquent behavior -- including truancy, vandalism, theft. These effects on delinquency were smaller in magnitude (ESs below -.2 except for one of the 10 comparisons whose ES was approximately -.42).

Encouragement to adopt norms against drug use during adolescence has also been identified as an essential element of drug abuse prevention (Institute of Medicine [IOM], 1994). Curricula that promote norms against drug use often include portrayals of drug use as socially unacceptable, identification of short-term negative consequences of drug use, provision of evidence that drug use is less prevalent among peers than children may think, encouragement for children to make public commitments to remain drug-free, and the use of peer leaders to teach the curriculum (IOM, 1994, page 264). These activities are present in 29% of drug prevention curricula (Hansen, 1992), but always in conjunction with other components such as conveying information about risks related to drug use and resistance skills training. Norm-setting and public

pledges to remain drug-free are usually elements of the most effective drug education curricula, but meta-analyses have not been able to disentangle the effects of the various components. In a study designed to do just that, Hansen & Graham (1991; scientific methods score=4) found that positive effects on marijuana use and alcohol use were attributable more to a normative education than to a resistance skills training component.

In summary, programs aimed at setting norms or expectations for behavior, either by establishing and enforcing rules or by communicating and reinforcing norms in other ways (e.g., campaigns), have been demonstrated in several studies of reasonable methodological rigor to reduce alcohol and marijuana use and to reduce delinquency. Note, however, that studies in which school rules were manipulated also used school teams to plan and implement the programs, so it is not possible to separate the specific effects of the school rule and discipline strategies from the more general effects of encouraging teams of school personnel to solve their schools' problems.

Managing Classes

Most of students' time in school is spent in classrooms. How these micro-environments are organized and managed may influence not only the amount of disorderly behavior that occurs in the class but also important precursors of delinquency and drug use, including academic performance, attachment and commitment to school, and association with delinquent peers.

Classroom organization and management strategies are found in most school-based prevention studies. They are usually incorporated into both the school-wide interventions summarized above and (less often) into the instructional interventions described later. For example, cooperative learning strategies were used in Project PATHE (Gottfredson, 1986), the Effective Schools Project (Gottfredson, 1987), and Project STATUS (Gottfredson, 1990), all of which demonstrated reductions in delinquent behavior. Classroom management techniques were used in Project BASIS (Gottfredson, Gottfredson, & Hybl, 1993). In all of these projects, the classroom instruction and management strategies were elements of broader, school-wide organization development or discipline management projects (or in the case of STATUS, a law-

- Smaller kindergarten and first grade classrooms
- Within-class and between-grade ability grouping in elementary grades
- Nongraded elementary schools
- Behavioral techniques for classroom management
- Continuous progress instruction (e.g., instruction in which students advance through a defined hierarchy of skills after being tested for mastery at each level usually with teachers providing instruction to groups of students at the same instructional level)
- Computer-assisted instruction
- Tutoring
- Cooperative learning

Effective Instructional Practices Summarized in
Brewer et al. (1995)

related education curricular intervention), thus making it impossible to isolate the effects of the classroom strategies. Classroom management innovations constitute the major intervention in the studies summarized in this section.

The literature on effective instructional processes is vast. Most of this literature assesses effectiveness on academic outcomes rather than on behavioral outcomes. Brewer et al. (1995) summarize existing meta-analyses of instructional strategies and conclude that the strategies shown in the box on the preceding page increase academic performance, which is related to delinquency and drug use. These instructional strategies should be considered promising elements of prevention efforts at the classroom level, although their effects on delinquency and substance use have not been demonstrated.

Table 5-3 summarizes evidence from two long-term interventions intended to test the efficacy of upgrading classroom instructional and management methods on subsequent substance use and delinquent behavior. The Seattle Social Development Project (Hawkins et al., 1988; 1991; 1992; O'Donnell et al, 1995) used cooperative learning strategies, proactive classroom management, and interactive teaching. Proactive classroom management consisted of establishing expectations for classroom behavior, using methods of maintaining classroom order that minimize interruptions to instruction, and giving frequent specific contingent praise and encouragement for student progress and effort. Interactive teaching involved several instructional practices generally accepted as effective (e.g., frequent assessment, clear objectives, checking for understanding, and remediation). Cooperative learning used small heterogeneous learning groups to reinforce and practice what the teacher taught. Recognition and team rewards were provided to the teams, contingent on demonstrated improvement. Parent training in family management practices was also provided. This program was implemented with support from OJJDP continually from first through sixth grades in several elementary schools beginning in 1981. In addition, the classroom management strategies were implemented without the parent training in a one-year study of seventh graders (Hawkins, Doueck, & Lishner, 1988). Several of the project reports are summarized in Table 5-3. The evaluations demonstrated consistent significant positive effects on attachment and commitment to school, and the absence of such effects on belief in moral order and attitudes about substance use. For the long-term project including parent training, measures of alcohol and marijuana use generally favored the treatment students, but were marginally significant and sometimes significant only for girls. Measures of aggressive behavior favored the treatment group in second grade, but only for males. By fifth grade, measures of school misbehavior and minor delinquency initiation showed no significant effects for the full sample. By sixth grade, a lower delinquency initiation was observed for the treatment group, but only for low income males participating in the program. For low-achieving seventh graders who received the classroom portion of the program with no parent training, no significant effects were observed on measures of delinquency and drug use, although the treatment group had significantly fewer suspensions from school.

Table 5-3. Studies of Classroom Management

Author (year)	Scientific methods score/ Number of cases	Effect size for measure of problem behavior	Effects on risk and protective factors
Hawkins, Von Cleve, & Catalano (1991) [results for second graders after two years of program]	3 N=458 boys & girls	Aggressive behavior (teacher reports) [favors treatment, significant for males only, ES=-.34 for males] Externalizing problem behavior (teacher reports) [favors treatment, significant for males only, ES=-.29 for males]	Internalizing problem behaviors, anxiety, social withdrawal [NS]
Hawkins, Catalano, Morrison, O'Donnell, Abbott, & Day (1992) [results for fifth graders after four years of program]	2 N= 853 boys & girls	Alcohol use [favors treatment, almost significant ($p < .1$), ES=-.12] Minor delinquency initiation [NS; ES=-.11] School misbehavior [NS]	Attachment to school, Commitment to school, Attachment to family, Family management [significantly favors treatment] Achievement test scores [significantly favors control] Belief in moral order, Attitudes favoring substance use [NS]
O'Donnell, Hawkins, Catalano, Abbott, & Day (1995) [results for sixth graders after six years of program]	2 N= 49 boys and 57 girls (analyzed separately by gender)	Alcohol use [favors treatment for girls only; almost significant ($p < .1$) for girls only, ES=-.40 for girls] Marijuana use [favors treatment for girls only; almost significant ($p < .1$) for girls only, ES=-.34 for girls] Minor delinquency initiation [favors treatment, almost significant ($p < .1$) for boys only, ES= -.54 for boys]	Attachment to school [significantly favors treatment. $p < .05$ for girls, $p < .10$ for boys] Commitment to school [significantly favors treatment for boys and girls] Grades [favors treatment, significant for boys only] Achievement test scores [favors treatment, significant for boys only] Belief in moral order [NS] Attitudes favoring substance use [NS]

Author (year)	Scientific methods score/ Number of cases	Effect size for measure of problem behavior	Effects on risk and protective factors
Hawkins, Doueck, & Lishner (1988) [results for seventh graders after one year of program]	3 N=160 low- achieving boys and girls	Self-reported delinquency [NS; ES's range from .04 to .14 favoring control] Drug use [NS; ES=-.11 favoring treatment] Times suspended [significantly favors treatment, ES=-.37]	Achievement test scores [NS] School attachment [of 6 items, 2 significantly favor treatment group] Commitment to school [significantly favors treatment]
Battistich, Schaps, Watson, & Solomon (1996) [fifth and sixth graders assessed after each year of a two-year program]	3 N=1479 - 1745, depending on the year	Alcohol use [significantly favors treatment, ES=-.12] Marijuana use [NS] Delinquency [10 items, NS]	NA
Solomon, Watson, Delucchi, Shaps, & Battistich (1988) [Kindergarten through fourth grade classrooms assessed after each year of a five-year program]	3 N=67 class- rooms	Negative behaviors observed in classrooms [NS]	Supportive and friendly behaviors [significantly favors treatment] Spontaneous pro-social behavior [significantly favors treatment]

A second major classroom intervention (CDP, the Child Development Project) was conducted with several cohorts of elementary school students in 12 elementary schools for 2 consecutive years beginning in 1992 (Battistich et al, 1996). It included the following components:

- “Cooperative learning” activities intended to encourage student discussion, comparison of ideas, and mutual challenging of ideas on academic and social topics;
- A “values-rich” literature-based reading and language arts program intended to foster understanding of diversity;
- “Developmental discipline,” a positive approach to classroom management that stresses teaching appropriate behavior rather than punishment, involving students in classroom management, and helping them to learn behavior management and conflict resolution skills;
- “Community-building” activities aimed at increasing appreciation for diversity or students’ sense of communal involvement and responsibility; and
- “Home-school” activities to foster parent involvement in their children’s education.

A similar program was conducted in three elementary schools for 5 consecutive years beginning in 1982 (Solomon et al, 1988). The evidence from evaluations of these efforts is also summarized in Table 5-3. The program increased pro-social behaviors but did not decrease negative behavior among students in grades K through 4. It had no effect on delinquency or marijuana use, but alcohol use among the treatment youths in grades 5 and 6 was significantly lower than among the control students (Battistich et al, 1996; $ES = -.12$). In this study, supplementary analyses which take into account varying levels of implementation across schools showed that marijuana use and two of the ten delinquency items were significantly lower among treatment youths in the schools with the highest level of implementation, but these results are ambiguous because the high implementation schools also have strikingly higher levels of marijuana use and delinquency at all time-points. Regression to the mean is not ruled out as an alternative explanation for the observed pattern of results.

In all but one study, classroom management strategies were combined with family-based strategies, making it impossible to determine the unique effects of the classroom intervention. Program effects were not as positive in the one study that used only the classroom strategies. Both the CDP and Seattle projects found evidence of positive effects on substance use initiation, but the effects were sometimes only marginally significant and were not as consistent across different substances and gender groups as would be expected. Also, although these strategies appear effective for increasing positive behaviors and a number of protective factors, little promise for reducing delinquency is demonstrated. Classroom organization and management strategies should be combined with other more potent components and tested more rigorously.

Regrouping Students

Four studies have examined interventions which group students to create more supportive

or challenging environments for high-risk youths. Felner, Ginter & Primavera (1982) and Felner & Adan (1988) studied the School Transitional Environment Project (STEP), a one-year program for students making the transition to high school. Incoming students were assigned to small "schools within the school" consisting of 65 to 100 students. Students remained in intact small groups for their home room period and their academic subjects, and these classrooms were physically close together. The role of the home room teacher was redefined so as to include more responsibility for meeting the administrative, counseling, and guidance needs of the students. Reyes & Jason (1991) implemented a similar program which also contained an attendance monitoring component. D. Gottfredson (1990) studied another school-within-a-school intervention -- Student Training Through Urban Strategies (STATUS), one of the programs in OJJDP's alternative education initiative. This program grouped high-risk youths to receive an integrated social studies and English program which involved a law-related education curriculum and used instructional methods emphasizing active student participation. Students stayed together for two hours each day. These studies are summarized in Table 5-4.

STEP increased protective factors (school attendance, persistence, and achievement) in the Felner studies, but its replication in Reyes & Jason was largely a failure. STATUS reduced delinquency and drug use (ESs range from -.07 to -.42) and changed in the desired direction several risk and protective factors related to delinquency. STATUS involved innovative teaching methods (many of which are reviewed in the classroom management section above), a law-related education curriculum, and the innovative school-within-a-school scheduling. It is not possible to disentangle the effects of these components. However, the major intermediate outcome through which the law-related education curriculum was expected to reduce delinquency -- belief in the validity of laws -- was the only outcome that did not favor the treatment group. We have seen above that classroom management strategies alone or in combination with family interventions do not reduce delinquency. It is unlikely, therefore, that the positive effects found in the STATUS program were due solely to the instructional and classroom management methods or to the law-related education curriculum. The study suggests that the combination of innovative grouping and scheduling with the other two components is promising.

Table 5-4. Summary of Studies using Reorganization of Grades or Classes

Author (year)	Scientific methods score/ Number of cases	Effect size for measure of problem behavior	Effects on risk and protective factors
Felner, Ginter & Primavera (1982); Felner & Adan (1988) [results for ninth graders directly following a one-year program, with follow-up one and three years following program]	4 N=172 students	NA	School dropout during three years following the program -- 43% of controls vs. 21% of treatment dropped out (significant difference) Absenteeism and grade-point-average -- significantly favors treatment at end of one year of treatment and at end of year following treatment
Gottfredson (1990) [results at end of one-year program in one junior and one senior high school]	4 N=123 junior high and 124 senior high students	Delinquency -- favors treatment group in both schools, significant for high school only [ES's -.33 and -.42] Drug Involvement -- significantly favors treatment group in both schools [ES's -.42 and -.35] Court contacts -- favors treatment group in both schools, NS [ES's - .07 and -.18]	Negative peer influence, grades, and attachment to school -- significantly favor treatment group in both schools School attendance -- favors treatment students in both schools, NS Number of months enrolled in school -- significantly favors treatment students, high school only Belief in rules -- favors control students, both schools, NS Educational expectations -- favors treatment students in high school, control students in junior high, NS.
Reyes & Jason (1991) [results for ninth graders at end of one-year program]	4 N= 154	NA	Achievement test scores -- one of three tests significantly favors treatment Grade point average, absences, and dropout -- At the end of one year of treatment, NS

In summary, programs which group high-risk students to create smaller, more tightly-knit units for instruction show promise for reducing delinquency, drug use and drop-out. These programs are risky in light of other research that shows negative effects of grouping high-risk youths for peer counseling or other therapeutic services (to be reviewed shortly), but the studies summarized in this section suggest that it may be beneficial to group high-risk for instruction in the context of "schools-within-schools" which offer a strong academic program, use effective instruction and classroom management strategies, and supportive staff.

A note on alternative schools. Alternative schools for disruptive youths are often proposed as a solution to the problem of disorder in schools. OJJDP's alternative education initiative sponsored five such schools, all small schools for students who had not flourished in the regular school setting. After reviewing the content of these programs, G. Gottfredson (1987) concluded that they are far too variable in nature, student composition, structure, and purpose to warrant any blanket statement about their effectiveness. He reviews two of the five models -- one based on a theory that intense personal involvement of the educators with the youth would reduce delinquency through increased bonding, and the other based on the theory that rigorous discipline and behavior modification techniques would result in decreased delinquency. The evaluation of the first program found remarkable improvements in several risk factors for delinquency, including commitment to school, attachment to school, and belief in rules. It also found significantly less self-reported drug use (but not self-reported delinquency or arrest records) among alternative school students than among controls. The evaluation of the second alternative school implied that the program was effective for increasing several measures of academic persistence, but that students liked school less and reported significantly more delinquent behavior than the comparison students. The varied models employed in alternative schools suggest that the question, "are alternative schools effective?" is too simplistic. The components of the interventions involved in alternative schools must be disentangled in future evaluations.

Individual-Change Strategies

Strategies that aim to alter students' delinquent behavior or their knowledge, skills, beliefs, behaviors or attitudes directly related to delinquent behavior are summarized below. These strategies include instruction with specific content related to delinquency or drug use; methods aimed at changing thinking strategies (cognitive or cognitive-behavioral training); behavior modification; peer counseling, mediation, and leaders; other counseling; mentoring; and "alternatives" programs which provide opportunities for recreation, enrichment or leisure.

Instructing Students

The most common school-based prevention strategy is instruction. Most schools provide instruction aimed at reducing drug use or delinquency, often in the form of the programs like Drug Abuse Resistance Education (D.A.R.E.), Law-related Education (L.R.E.), and Gang Resistance Education and Training (G.R.E.A.T.), which enjoy substantial federal subsidy. The content of interventions that provide instruction to students is varied. The box at the right shows

some of the topics covered in instructional programs.

The following pages summarize what is known about the effectiveness of drug education, broader social competency development curricula, violence prevention curricula, and law-related education. The first two of these curriculum types have been studied extensively and several excellent secondary reviews are available. These secondary reviews will be summarized and only the most rigorous studies will be singled out for discussion. Instructional programs funded by OJP (D.A.R.E. and Law-related education) and a gang prevention program recently evaluated with N.I.J. funding (G.R.E.A.T.) will also be summarized here.

Alcohol and other drug education.

Several meta-analyses and reviews of the effectiveness of school-based drug prevention instruction have been conducted (Botvin, 1990; Botvin et al, 1995; Dryfoos, 1990; Durlak, 1995; Hansen, 1992; Hawkins, Arthur, & Catalano, 1995; Institute of Medicine, 1994; Tobler, 1986, 1992). Botvin (1990) traces the historical development of these programs. He shows that "information dissemination" approaches which teach primarily about drugs and their effects, "fear arousal" approaches that emphasize the risks associated with tobacco, alcohol, or drug use, "moral appeal" approaches which teach students about the evils of use, and "affective education" programs which focus on building self-esteem, responsible decision-making, and interpersonal growth are *largely ineffective* for reducing substance use. On the contrary, approaches which include resistance-skills training to teach students about social influences to engage in substance use and specific skills for effectively resisting these pressures alone or in combination with broader-based life-skills training do reduce substance use. The box to the right shows the typical content of these instructional programs. Curricula which focus on general life-skills are typically longer than those which focus only on social resistance skills.

- General health or safety;
- Alcohol, tobacco, and other drugs: information about and consequences of use;
- Violence prevention;
- Character/moral development;
- Law;
- Recognizing and resisting social influences to engage in misbehavior and risky situations, being assertive;
- Identifying problem situations, generating alternative solutions, evaluating consequences;
- Setting personal goals, self-monitoring, self-reinforcement, self-punishment;
- Attributing the cause of events or circumstances to ones own behavior;
- Interpreting and processing social cues, understanding non-verbal communication, negotiating, managing anger, controlling stress, anticipating the perspectives or reactions of others.

Topics Covered in Instructional Programs

This section summarizes substance abuse curricula having an emphasis on social competency skill development. Two such school-based instructional prevention programs which have been scrutinized using rigorous methods are ALERT (Ellickson & Bell, 1990, Ellickson, Bell, & McGuigan, 1993) and Life Skills Training (L.S.T., Botvin & Eng, 1982; Botvin, Baker, Botvin et al, 1984; Botvin, Baker, Renick et al, 1984; Botvin, Batson et al, 1989). ALERT is essentially a social resistance-skill curriculum consisting of eight lessons taught a week apart in the seventh grade, followed by three eighth grade "booster" lessons. L.S.T. is a more comprehensive program focusing on resistance skills training as well as the general life skills mentioned above. This program consists of 16-sessions delivered to seventh grade students followed by eight session "boosters" in grades eight and nine. This section ends with a discussion of D.A.R.E., an OJP-funded substance abuse prevention program whose content is not as focused on social competency development as the other programs summarized.

Components of Social Resistance Skills Instruction:

- Increasing student awareness of the social influences promoting substance use
- Teaching skills for resisting social influences from peers and the media
- Correcting normative expectations concerning the use of substances

Additional Skills Targeted in Life-Skills Instruction:

- Problem-solving and decision-making
- Self-control or self-esteem
- Adaptive coping strategies for relieving stress or anxiety
- Interpersonal skills
- Assertiveness

Typical Content of Social Influence and Life-Skills Instruction

The ALERT study (scientific methods score=5) was a multi-site experiment involving the entire seventh grade cohort of 30 junior high schools drawn from eight urban, suburban, and rural communities in California and Oregon. These 30 schools were randomly assigned to treatment and control conditions. Results are reported using individuals as the unit of analysis, although the investigators reported that results from school-level analyses supported the same conclusions with more positive results. Program effects were assessed directly after the seventh grade programs as well as before and directly after the eighth grade booster. Students were followed up again when they were in 9th, 10th, and 12th grades. The program had positive effects for both low- and high-risk students and was equally effective in schools with high and low minority enrollment. The program's most consistent effects were found for marijuana use. It reduced the use of marijuana among students at each risk level, with the strongest effects for the lowest risk group: those students who had not initiated either cigarette or marijuana use at the time of the baseline measurement. In this group, 8.3% of the ALERT students compared with 12.1% of the control students ($ES = -.08$) had initiated marijuana use by the end of the eighth grade booster. Small but statistically significant positive effects on the amount of marijuana used were observed for the other risk groups directly after the seventh grade sessions, but these effects were no longer statistically significant (and were not practically meaningful) by the end of the booster session.

For all groups, small positive program effects were initially observed for alcohol use, but they too eroded by grade 8. The follow-up studies showed that once the lessons stop, so did the program's effects on drug use. Although some effects on cognitive risk factors persisted through grade 10, they were not sufficient to produce reductions in drug or alcohol use.

L.S.T. has also undergone rigorous test in an ongoing series of studies first published in 1980, conducted by Botvin and his colleagues. The more recent studies examined the effect of the program on alcohol and marijuana use (in addition to cigarette use) and tracked long-term program effects. Botvin, Baker, Renick, Filazzola & Botvin (1984; scientific methods score=3) examined the effectiveness of a 20-session course delivered to 7th graders from 10 suburban New York junior high schools. The subjects were primarily white, from middle-class families. Schools were randomly assigned to receive the program as implemented by older students, by regular classroom teachers, or to serve as controls. All analyses were reported using individuals as the unit of analysis. Results measured immediately after the program showed that program students compared with control students were significantly less likely to report using marijuana ($ES = -.10$) and engage in excessive drinking, but these positive effects were found only for the peer-led condition. Botvin, Baker, Filazzola & Botvin (1990; scientific methods score=4) reported on the one-year follow-up of this study. This study contrasts not only the teacher- and peer-led conditions, but also the presence or absence of a 10-session booster course delivered during eighth grade. As with the ALERT study, the results showed that the effects of the program diminished without the booster. In the peer-led condition with the booster session, significant effects were maintained at the end of the eighth grade on the amount of alcohol used and marijuana use (ES s ranged from .04 for used in last day to .16 for used in last month). Again, positive effects were found only for the peer-led condition.

In a larger study involving 56 public schools, the same 20-session 7th grade program, 10-session booster session in eighth grade, and an additional 5-session booster in the ninth grade was studied for long term effects on substance use at 12th grade (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; scientific methods score=5). In this study, the 56 schools (serving mainly white, middle-class populations) were stratified according to baseline levels of cigarette smoking and geographic location and randomly assigned to experimental conditions. All results were reported using individual students as the level of analysis. This study involved only teacher-led classrooms. The 12th grade results for the full sample of 3,597 subjects revealed significant positive effects on the prevalence of drunkenness (ES s range from -.08 to -.10), but not for other measures of alcohol use. Significant effects were not reported for marijuana use, although the effect size for the prevalence of weekly marijuana use is as large (-.09) as the effects sizes for the significant effects on excessive drinking. The lower base rate for marijuana use reduces the likelihood of finding statistically significant results for this outcome. When only subjects who received a reasonably complete version of the program were examined, the results were more positive. Additional research (Botvin, Batson, Witts-Vitale, Bess, Baker, & Dusenbury, 1989; Botvin, Dusenbury, James-Ortiz, & Kerner, 1989) showed that the positive effects generalize to African American and Hispanic American populations.

D.A.R.E., developed in 1983 by the Los Angeles Police Department and the Los Angeles Unified School District, is the most frequently used substance abuse education curriculum in the United States. According to D.A.R.E. America (Law Enforcement News, 1996), the program is now used by seventy percent of the nation's school districts and will reach 25 million students in 1996. About 25,000 police officers are trained to teach D.A.R.E. It is also popular in other countries, forty-four of which have D.A.R.E. programs. The complete array of D.A.R.E. activities currently on the market includes "visitation" lessons in which police officers visit students in kindergarten through fourth grade for brief lessons on topics such as obeying laws, personal safety, and the helpful and harmful uses of medicines and drugs; a 17-week core curriculum for fifth or sixth graders (to be described shortly); a 10-week junior high school program focusing on resisting peer pressure, making choices, managing feelings of anger and aggression, and resolving conflicts; and a 10-week senior high program (co-taught with the teacher) on making choices and managing anger. In addition, D.A.R.E. offers an after-school program for middle-school-aged students, called D.A.R.E. + PLUS (Play and Learn Under Supervision). This provides a variety of fun activities for students during the after-school hours. Programs for parents and special education populations are also available.

The core 17-lesson curriculum delivered to students in grades 5 or 6 has always been the most frequently used form of the program. The great majority (81%) of school districts with D.A.R.E. implement the core curriculum, while 33% use the visitations, 22% the junior high, 6% the senior high, and 5% the parent curriculum (Ringwalt et al, 1994). The core curriculum is the only part of the program that had undergone rigorous outcome evaluation.

The core D.A.R.E. program is taught by a uniformed law enforcement officer. The original 17-lesson core curriculum focuses on teaching pupils the skills needed to recognize and resist social pressures to use drugs. It also contains lessons about drugs and their consequences, decision-making skills, self-esteem, and alternatives to drugs. Teaching techniques include lectures, group discussions, question and answer sessions, audiovisual materials, workbook exercises, and role-playing. The curriculum was revised in 1993 to substitute a lesson on conflict resolution and anger management skills for one on building support systems.

Several evaluations of the original 17-lesson core have been conducted⁷. Many of these are summarized in a meta-analysis of D.A.R.E.'s short-term effects (Ringwalt et al, 1994), sponsored by NIJ. This study located 18 evaluations of D.A.R.E.'s core curriculum, of which 8 met the methodological criterion standards for inclusion in the study. The study found:

⁷ Evaluations of D.A.R.E. are too numerous for detailed summary of each. The Bureau of Justice Assistance has identified 23 D.A.R.E. evaluations conducted between 1991 and 1996, several of which are included in the summary below. Others are not included because they are primarily descriptive evaluations of state-level efforts which have not appeared in the scientific literature. An assessment of this fugitive literature seems unnecessary given the consistency of findings in the published literature. At any rate, such an effort is beyond the scope of this review.

1. Short-term effects on drug use are, except for tobacco use, nonsignificant.
2. The sizes of the effects on drug use are slight. Effect sizes average .06 for drug use and never exceed .11 in any study. The effects on known risk factors for substance use targeted by the program are also small: .11 for attitudes about drug use and .19 for social skills.
3. Certain other programs targeting the same age group as D.A.R.E. -- upper elementary pupils -- are more effective than D.A.R.E. "Interactive" programs which emphasize social skill development and social competencies and use interactive teaching strategies have effect sizes for increasing social skills, reducing attitudes favorable to use, and reducing drug use at least three times as large as D.A.R.E. Other programs which emphasize knowledge about drugs and affective outcomes (such as self-esteem) and are primarily delivered by an expert are no more effective than D.A.R.E. Note, however, that even the more effective programs show only small effect sizes ($ES=.18$) for reducing drug use.

Four more recent reports, three of them longitudinal, have also failed to find positive effects for D.A.R.E. Lindstrom (1996), in a reasonably rigorous study (scientific methods score= 3) of approximately 1,800 students in Sweden, found no significant differences on measures of delinquency, substance use, or attitudes favoring substance use between students who did and did not receive the D.A.R.E. program. Sigler & Talley (1995) (scientific methods score= 2) found no difference in the substance use of seventh grade students in Los Alamos, New Mexico who had and had not received the D.A.R.E. program 11 months before. Rosenbaum, Flewelling, Bailey, Ringwalt, & Wilkinson (1994; scientific methods score= 4) report on a study in which twelve pairs of schools (involving nearly 1,600 students) were randomly assigned to receive or not receive D.A.R.E. Although some positive effects of the program were observed immediately following the program, by the next school year no statistically significant differences between the D.A.R.E. and non-D.A.R.E. students were evident on measures of the use of cigarettes or alcohol. Also, only one of thirteen intervening variables targeted by the program showed a positive effect. Clayton, Cattarello, and Johnstone (1996; scientific methods score= 4) reported on long-term effects for D.A.R.E. Thirty-one schools were randomly assigned to receive or not receive D.A.R.E. All students in the sixth grades in these schools were pre-tested prior to the program, post-tested shortly after the program, and resurveyed each subsequent year through the 10th grade. Although positive effects were observed during the seventh grade on some risk factors for substance use, no significant differences were observed between the D.A.R.E. and control schools on measures of cigarette, alcohol, or marijuana use either during seventh grade or at any later point. These studies and recent media reports have criticized D.A.R.E. for (a) focusing too little on social competency skill development and too much on affective outcomes and drug knowledge; (b) relying on lecture and discussion format rather than more interactive teaching methods; and (c) using uniformed police officers who are relatively inexperienced teachers and may have less rapport with the students.

To the untrained eye, the content and methods used in D.A.R.E. are not strikingly

different from those used in the more effective programs such as Life Skills Training (summarized above) and Social Problem Solving (summarized below). But more subtle differences exist: L.S.T. and S.P.S. provide broader and deeper coverage of and more practice for students in the development of social competency skills. For example, while all three programs contain lessons on identifying social influences to use drugs and problem-solving, the non-D.A.R.E. programs provide more lessons on these topics and also include lessons on communication skills or emotional perspective taking. Weissberg's S.P.S. program is able to address self-control skills in greater depth because it completely omits lessons on self-esteem and factual information about drugs. The instructional methods are also different: L.S.T. and S.P.S. were carefully designed to make use of cognitive-behavioral methods including *frequent* role-playing, rehearsal of skills, and behavioral modeling. These methods are main features of the programs. D.A.R.E., even with the addition of more "interactive" techniques, lacks a major emphasis on the use of these carefully developed, research-based teaching techniques.

Although the content and method differences described above probably account for some of the discrepancy between the effects found for the different types of instructional programs, the largest difference among the programs is D.A.R.E.'s use of uniformed officers to deliver the program, a feature that remains in the revised D.A.R.E. and whose effects on the efficacy of the program are unknown.

D.A.R.E. proponents challenge the results of the scientific D.A.R.E. evaluations. Officials of D.A.R.E. America are often quoted as saying that the ample public support for the program is a better indicator of its utility than scientific studies. They criticize D.A.R.E. studies for (a) looking only at the original D.A.R.E. model; (b) focusing on the absence of effects on alcohol and drug use among fifth and sixth graders when the base rates are so low that effects would naturally be difficult to detect; and (c) failing to study the longer term effects of D.A.R.E. which are expected to be more substantial. Each of these points is addressed below.

In 1993, D.A.R.E. added more coverage of social competency skills and more interactive teaching techniques to its core curriculum (Ringwalt et al, 1994). These changes were expected to bring the program more in line with the competition. No outcome evaluation of this revised curriculum has been reported, but it appears unlikely that the revision will change the results much because the largest difference between the earlier and revised program is the substitution of a single lesson on reducing violence for one on building support systems. Ringwalt et al. (1994) show that even in the revised core curriculum for D.A.R.E., only 9 of the 17 lessons cover social skill development.

D.A.R.E. is indeed atypical in its focus on elementary school-aged youths. As Hansen (1992) demonstrated, the percentage of fifth graders estimated to have used tobacco, alcohol or marijuana in the past month ranges between about 1 and 8 percent nationally. While lifetime use estimates (the outcome measure often used in D.A.R.E. evaluations) are certainly higher, the relatively low prevalence rates mean that larger samples may be required in studies of D.A.R.E. than in studies of programs targeting slightly older students. But D.A.R.E. evaluations can not be

summarily dismissed on the basis of these criticisms because some have involved samples whose base rates for substance use are much higher than the national average and others have involved samples with sufficient power to detect meaningful differences even in low-base-rate populations. For example, the Rosenbaum et al. (1994) study involved nearly 1,600 students in a sample whose base rate for lifetime alcohol use was 55%. Half of the studies summarized in the Ringwalt et al. (1994) study had sample sizes larger than 1,000, and none could be described as small-sample research. Also, the Ringwalt et al. (1994) meta-analysis relied not only on statistical significance tests, which are misleading when the number of cases is not sufficiently large to detect the expected effect, but also on effect sizes to assess the magnitude of the effects regardless of statistical significance. Inferences based on effect sizes are not as prone to misinterpretation as those based on significance levels.

D.A.R.E. proponents also argue that D.A.R.E.'s effects are delayed -- i.e., that effects appear when students reach higher grades. The three recent longer-term evaluations of D.A.R.E. (Clayton, Cattarello, & Johnstone, 1996; Sigler & Talley, 1995; Rosenbaum, Flewelling, Bailey, Ringwalt, & Wilkinson, 1994; summarized above) do not support this contention. The absence of long-term effects is not surprising given the more general finding that effects for instructional substance use prevention programs decay rather than increase over time in the absence of continued instruction.

✓ In summary, using the criteria adopted for this report, D.A.R.E. does not work to reduce substance use. The programs's content, teaching methods, and use of uniformed police officers rather than teachers might each explain its weak evaluations. No scientific evidence suggests that the D.A.R.E. core curriculum, as originally designed or revised in 1993, will reduce substance use in the absence of continued instruction more focused on social competency development. Any consideration of the D.A.R.E.'s potential as a drug prevention strategy should place D.A.R.E. in the context of instructional strategies in general. No instructional program is likely to have a dramatic effect on substance use. Estimates of the effect sizes of even the strongest of these programs are typically in the mid- to high-teens. D.A.R.E.'s meager effects place it at the bottom of the distribution of effect sizes, but none of the effects are large enough to justify their use as the centerpiece of a drug prevention strategy. Rather, such programs should be embedded within more comprehensive programs using the additional strategies identified elsewhere in this chapter.

Broader social competency development curricula. Other curricula focus specifically on social competency development, without an emphasis on substance abuse prevention per se. Weissberg's social competence promotion program, for example, covers the entire array of social competency skills without tying them directly to any specific problem behavior. Problem-specific modules aimed at preventing anti-social and aggressive behavior, substance use, and high-risk sexual behavior are available. The program ranges in length from 16- to 29-sessions, depending on the version.

Caplan, Weissberg, Grober, Sivo, Grady, & Jacoby (1992; scientific methods score=4) studied the effect of a 20-session version of Weissberg's social competence promotion program

aimed at stress management, self-esteem, problem-solving, substances and health information, assertiveness and social networks on 282 sixth and seventh graders in an inner-city and a suburban middle school in Connecticut. Classrooms were randomly assigned to receive the program or not. Results were reported using individuals as the unit of analysis. Students in program classes improved relative to students in the control classrooms on measures of problem-solving ability and stress management. Teacher ratings of the participating students improved relative to the controls on measures of conflict resolution with peers and impulse control, both important protective factors for later delinquency, and popularity. Students' self-reports of their behavioral conduct were not affected by the program, and effects on self-reports of intentions to drink alcohol and use drugs were mixed. No significant difference was found for a self-report measure of frequency of cigarette, alcohol, and marijuana use, but program students reported significantly less excessive drinking than controls (ESs range from .26 to .32). The program was as effective for students in the inner-city and the suburban schools. The sample size in this study was likely too small to detect as statistically significant any small differences between the treatment and comparison students.

In another study involving 447 students from 20 classes in four urban, multi-ethnic schools, Weissberg & Caplan (1994; scientific methods score=4) evaluated a similar 16-session social competence promotion program for students in grades five through eight. This version of the program did not include lessons on substance use. It focused on teaching students:

- impulse-control and stress-management skills,
- thinking skills for identifying problem situations and associated feelings,
- establishing positive pro-social goals,
- generating alternative solutions to social problems, anticipating the likely consequences of different actions, choosing the best course of action, and successfully enacting the solution.

Random assignment to treatment and control conditions was not accomplished in this study. Program students improved more than controls on problem-solving abilities and pro-social attitudes towards conflict resolution. Teacher ratings indicated that the training improved impulse control, problem-solving, and academic motivation and decreased teasing of peers, important risk and protective factors for later delinquency. Self-reported delinquency of a relatively minor form (stealing, starting fights, vandalism, skipping school, etc.) also increased less for the program participants (2.8% increase) than for comparison students (36.8% increase) between the beginning and the end of the program. No significant effects were observed for self-reports of substance abuse in this study. Weissberg & Greenberg (in press) summarize another study which shows that the positive effects of the program are maintained in the year after the program only when the training is continued into the second year

Greenberg, Kusche, Cook & Quamma (1995; scientific methods score = 4) report on the PATHS (Promoting Alternative Thinking Strategies) curriculum on emotional competence for elementary school-aged children. This project used a 60-lesson version of the curriculum

composed of units on self-control, emotions, and problem-solving. Lessons were sequenced according to increasing developmental difficulty and included didactic instruction, role-playing, class discussion, modeling by teachers and peers, social and self-reinforcement, and worksheets. Extensive generalization techniques were included to assist teachers in applying skills to other aspects of the school day. Specifically, the curriculum included:

- A Feelings and Relationships Unit -- 35 lessons on emotional and interpersonal understanding. The lessons cover approximately 35 different affective states and were taught in a developmental hierarchy beginning with basic emotions (e.g., happy, sad, angry) and proceeding to more complex emotional states (e.g., jealous, guilty, proud).
- Self-control and initial problem-solving -- The development of self-control, affective awareness and communication, and beginning problem-solving skills were integrated during the Feelings Unit with the introduction of the Control Signals Poster (CSP), which had a red light to signal "Stop - Calm Down," a yellow light for "Go Slow - Think," a green light to signal "Go - Try My Plan," and at the bottom, the words "Evaluate - How Did My Plan Work?" In a series of lessons, the children were taught skills to use with the different signals of the poster. For purposes of generalization, a copy of the CSP was placed in the classroom and teachers were coached on how to use this model for active problem-solving during the classroom day.
- Interpersonal Cognitive Problem-Solving -- 20 to 30 lessons sequentially covering eleven problem-solving steps, similar to those discussed above as part of Weissberg's program above.
- Generalization procedures -- A variety of generalization techniques were included throughout the curriculum to foster transfer of the skills and ideas taught.

The intervention teachers attended a 3-day training workshop and received weekly consultation and observation from project staff. The PATHS lessons were taught approximately 3 times per week, with each lesson lasting 20-30 minutes. The weekly consultations were intended to enhance the quality of implementation through modeling, coaching, and providing ongoing feedback regarding program delivery.

The social competency promotion intervention was field-tested in Washington state using random assignment of schools serving "regular education" students to treatment and control conditions as well as random assignment of classrooms of "special needs" children (in different school than the regular education students) to treatment and control conditions. In all, 286 students participated in the study. Students were in the first and second grades at the time of the pre-test, and in the 2nd and 3rd grades at the time of the first post-test, which occurred approximately one month after the end of the intervention. Two additional follow-up assessments were conducted to examine maintenance of effects one and two years after the intervention.

Immediate positive effects of the program were observed for both regular and special

education students on measures of the specific social competency skills targeted. Greenberg (1996) reports on the longer-term effects of the program. At the final follow-up, significant differences favoring the regular education treatment students emerged on teacher ratings of externalizing behaviors, a measure of serious conduct problems highly related to later delinquent behavior. Intervention students in both groups also self-reported significantly lower rates of conduct problems at the later follow-up points.

Violence-prevention instruction. Brewer, Hawkins, Catalano, & Neckerman (1995) provide a comprehensive summary of conflict resolution and violence prevention curricula. These instructional programs are designed to improve students' social, problem-solving, and anger management skills, promote beliefs favorable to nonviolence, and increase knowledge about conflict and violence. Brewer et al. (1995) summarize evaluations of eight violence prevention curricula. Target populations for these programs range from pre-K through grade 10. The quality of the evaluations of these programs is uniformly poor. No study used random assignment of subjects to treatment and comparison conditions. Only four of the studies assessed program effects on aggressive or violent behavior, and two of these studies suffered from serious methodological flaws. The other two studies reported positive results on measures of aggressive behavior, but no corresponding positive changes on attitudes towards violence.

Perhaps the most rigorous evaluation is for the Washington (DC) Community Violence Prevention Program (Gainer, Webster, & Champion, 1993; scientific methods score=3), a 15-session curriculum focusing on social information processing deficits and belief systems associated with aggressive behavior, modeled after the *Viewpoints* program that had received positive evaluations in a correctional institutional setting (Guerra & Slaby, 1990). The program was evaluated with 5th and 7th graders in three inner-city schools. Students receiving the course were compared with students from the same schools and grade levels during the following year. Program effects on violent behavior were not assessed, and effects on social problem solving skills and attitudes about violence were mixed. Some measures showed significantly positive effects, some significantly negative effects, and some no difference.

Gang Resistance Education And Training (G.R.E.A.T.) was developed in 1991 by the Phoenix Police Department to reduce adolescent involvement in criminal behavior and gangs. Although not specifically designed as a violence prevention program, its emphasis on gang membership, a major correlate of violent crime, justifies its inclusion here. The Bureau of Alcohol, Tobacco, and Firearms has funded officer training for this program, and as of July, 1996, more than 2,000 officers from 47 states and the District of Columbia had completed training. In 1994, NIJ began funding an evaluation of G.R.E.A.T.. It currently supports a three-year study to assess the short- and long-term effects of the program on students in six sites. A less rigorous preliminary assessment of effects one-year following the program in 11 cities was also recently completed with NIJ funding. Results from this preliminary study are summarized below.

G.R.E.A.T. is a brief (9-week) instructional program taught to middle school students by

trained, uniformed law enforcement officers. The program teaches students about the impact of crime on its victims and the community; cultural differences; conflict resolution skills; how to meet basic needs without joining a gang; and responsibility to the school and neighborhood. The program ends with a lesson in which students are taught the importance of goal-setting. The G.R.E.A.T. program differs from instructional programs known to be effective for reducing drug use or delinquency by being (a) less intensive; (b) almost entirely devoid of content and methods focusing on teaching students social competency skills; and (c) lacking follow-up sessions. It is taught by uniformed law enforcement officers -- a feature whose costs and benefits as a crime prevention strategy are unknown.

The preliminary evaluation of the program (Esbensen & Osgood, 1996) compared the survey responses of approximately 2,600 eighth grade students who said they had completed G.R.E.A.T. with those of approximately 3,200 eighth students who said they had not. The investigators attempted to shore up the weak evaluation design (post-test only for non-equivalent treatment and comparison groups) by statistically controlling for differences between schools and demographic characteristics of participants and non-participants, but the scientific methods score of the study remains only a 2 on our 5-point-scale. The study found several statistically reliable differences favoring the G.R.E.A.T. participants, including less delinquency ($ES = -.07$) and drug use ($ES = -.04$). Nineteen of the thirty-one outcomes examined significantly favored the G.R.E.A.T. participants, and none significantly favored the non-participants. The investigators cautioned that the magnitudes of the effects were very small and the design of this preliminary study is too weak to warrant confident conclusions about the effects of the program. The effect sizes for the significant delinquency and drug use outcomes are all less than .10 (e.g., the difference between the participants and non-participants on outcome measures is less than one-tenth of one standard deviation), suggesting that even if the effects could be safely attributed to the program they are small. Such small differences between groups are often detected as statistically significant in large studies. For this reason, the effect size is a more meaningful indicator of program effects.

Law-related education (L.R.E.). Schools have implemented law-related education curricula for nearly three decades. These curricula are designed to familiarize youths with the country's laws, develop appreciation of the legal process, encourage responsible political participation, develop moral and ethical values, and develop analytical skills. Lack of knowledge about the law, citizenship skills, and positive attitudes about the law and the role of the government are cited in L.R.E. materials as causes of juvenile crime.

In 1979, the justice department's National Institute for Juvenile Justice and Delinquency Prevention (NIJJP, OJJDP's research arm) funded five organizations to develop and demonstrate L.R.E. methods. An evaluation of these efforts, also funded by NIJJP, examined the effects of the program on delinquency and factors related to delinquency. Most of the results of this evaluation are summarized in Johnson & Hunter (1985). The evaluation included 61 L.R.E. elementary, junior, and senior high classrooms and 44 comparison classrooms in 32 schools in 6 states. The results for 1981, the first year of the evaluation, were regarded as

formative. It showed that L.R.E. did not always produce positive effects, and that the quality of implementation was correlated with the amount of positive change from pre- to post-test on many measures. Results for the second year of the evaluation (1982) were more positive, but the effects were, according to the authors, "severely diminished" except in one site in Colorado in which generally positive outcomes were observed. The strongest program implementation occurred in 1983. Johnson & Hunter (1985) summarize the results comparing outcomes, separately by teacher, for students in 21 L.R.E. classes and 14 comparison classes (most of which were non-randomly assigned). Out of 132 effects reported for the 11 delinquency items, 15 showed a significant effect (13 would have been expected by chance using the one-tailed test of significance reported). Nine of these differences favored the L.R.E. students, and six favored the comparison students. Significant program effects on attitudes towards deviance and violence favored the comparison students. Many positive effects were found for outcomes measuring knowledge about the law and legal practices and other outcomes that might be expected from improved classroom management techniques (such as reduced "clock watching").

Johnson (1984) focused on the nine L.R.E. classes in the site for which randomization to treatment and control conditions was obtained. He showed that the nine L.R.E. classes fared significantly better than the two control classes on more than half of the forty-one possible measures. Three of the eleven items measuring delinquency were reported as significantly favoring the L.R.E. group. The effect sizes for all eleven items ranged from 0 (for violence against other students) to .66 (for school rule infractions such as cheating on tests and skipping school). The average effects size for the eleven delinquency items was .22.

In summary, these evaluation activities from the early 1980s showed clear program effects on law-related factual knowledge. Effects on other outcomes were minimal. In one particularly strong site, consistent positive effects were observed on certain risk factors for delinquency (e.g. attachment to school and attitudes towards violence and deviance), but not others (e.g., association with delinquent peers) and small positive effects were found on certain measures of delinquency but not others.

This extensive national evaluation produced no bottom line. The part of the evaluation focusing on the entire national sample was the weakest methodologically (scientific methods score= 3) and showed no reason for optimism about L.R.E.'s effect on delinquency. The "sub-study" of Colorado sites was stronger methodologically, and more positive outcomes were observed. What is not clear, however, is the extent to which results for these "well-implemented" schools can be generalized to other schools implementing L.R.E. programs. Because the L.R.E. intervention at this site included a large dose of general instructional and classroom management training for teachers in addition to law-related activities it is not possible to rule out the possibility that any positive effects of the program are due to these general techniques rather than to the law-related content of the curriculum. Because L.R.E. programs are not necessarily augmented with these additional strategies, it is not clear that the positive evaluations are relevant to

understanding the effects of typical L.R.E. programs.⁸

Law-related education curricula, like other forms of instruction, will probably not reduce delinquency significantly when used in isolation. The L.R.E. program evaluators found that when the program is embedded in a more comprehensive program of improved classroom organization and management processes, the outcomes are better. Gottfredson (1990) also found that when an L.R.E. curriculum was enriched with state-of-the-art classroom instructional and organization methods *and* implemented in the context of a school-within-a-school model, it reduced delinquency. More work is now required to isolate the working parts of these multi-component programs involving L.R.E..

Statements found in materials published by the organizations that continue to develop and disseminate L.R.E. using OJJDP funding -- "Research indicates that properly implemented law-related education changes attitudes and reduces crime" (National Institute for Citizenship Education in the Law, 1988) -- are at best misleading because they ignore the results obtained for most of the sites in the national study. More rigorous evaluation is needed.

Summary. Certain instructional programs to reduce drug use have produced consistent evidence of positive effects on substance use in rigorous studies, and others have consistently shown no effects. "Information dissemination" instructional programs which teach primarily about drugs and their effects, "fear arousal" approaches that emphasize the risks associated with tobacco, alcohol, or drug use, "moral appeal" approaches which teach students about the evils of use, and "affective education" programs which focus on building self-esteem, responsible decision-making, and interpersonal growth are *largely ineffective* for reducing substance use. D.A.R.E. as it is most commonly implemented is largely ineffective for reducing substance use. Approaches which include resistance-skills training to teach students about social influences to engage in substance use and specific skills for effectively resisting these pressures alone or in combination with broader-based life-skills training do reduce substance use. But the effects of even these programs are small and short-lived in the absence of continued instruction. Hansen and O'Malley (1996) report average effect sizes for social influence training programs such as ALERT ranging from .14 to .27 (on alcohol, marijuana, and cigarette use), but Gorman (1995) shows these programs have little or no effect on drinking behavior. More comprehensive programs such as L.S.T. and Weissberg's Social-Problem Solving have effect sizes ranging from .08 to .37.

More comprehensive social competency promotion programs work better than programs which do not focus on social competencies and those that focus more narrowly on resistance skill training. Also, the more extensive the reliance on cognitive-behavioral training methods such as feedback, reinforcement, and behavioral rehearsal (as in the Greenberg and Weissberg programs)

⁸ The researchers who conducted the national evaluation for OJJDP have continued to develop and write about the program. Later reports contain the same ambiguity as the earlier study of the Colorado sites.

rather than traditional lecture and discussion, the more effective the program. The Weissberg and Greenberg works are also important because they demonstrate that social competency promotion programs works for reducing delinquency or early conduct disorder leading to delinquency as well as drug use.

Some violence prevention programs teach interpersonal skills and behaviors such as communicating, making eye-contact, cooperating, and sharing. Others use the same cognitive-behavioral strategies used in the most effective social competency promotion programs summarized above. These programs *seem* plausible, but until they are rigorously evaluated they should be used with caution. Just as the first-generation substance abuse prevention programs were found to increase rather than decrease drug use (Botvin, 1990), so might these early violence prevention efforts increase violence. Although described by some as "promising," the G.R.E.A.T. program does not meet the criteria necessary to earn this descriptor in our review. Until the outcome of the more rigorous evaluation now underway is complete, the effects of the program remain unknown.

The effects of law-related education curricula as typically implemented also remain unknown. Evaluations have supported their effectiveness when implemented as part of a more comprehensive program, but it is not clear to what extent the law-related curriculum contributes to the effectiveness, if at all. Rigorous research is needed.

Modifying Behavior and Teaching Thinking Skills

Behavior modification interventions focus directly on changing behaviors by rewarding desired behavior and punishing undesired behavior. Several well-known programs for delinquent youths (e.g., Achievement Place) rely on these methods, as do many educational programs -- especially those serving special education populations. Many programs for delinquent and "at-risk" populations also attempt to alter thinking skills. These "cognitive-behavioral training" interventions are based on a substantial body of research indicating that delinquents are deficient in a number of thinking skills necessary for social adaptation. Delinquents often do not think before they act, believe that what happens to them is due to fate or chance rather than to their own actions, misinterpret social cues, fail to consider alternative solutions to problems, and lack interpersonal skills necessary for effective communication. Programs often combine behavioral and cognitive methods in an attempt to alter immediate behavior and promote the generalization of behavior change to other settings.

As indicated above, instructional programs that teach social competency skills and rely on cognitive-behavioral methods such as feedback, reinforcement, and behavioral rehearsal are the most effective for reducing substance use in general populations. Meta-analyses (Garrett, 1985; Izzo & Ross, 1990; Lipsey, 1992) have also concluded that the most effective delinquency prevention and treatment programs incorporate strategies aimed at developing social skills and using cognitive-behavioral strategies. Forman (1980; scientific methods score=4) showed that

both cognitive training and behavioral interventions decrease aggressive behavior in elementary school children, although the behavioral intervention decreased disruptive behavior to a somewhat greater extent.

The programs reviewed below incorporate many of the same principles found in the more effective instructional programs. These programs differ in that they are often targeted at students identified as at especially high-risk for engaging in delinquent activities, are delivered in small groups or individually, and provide more intensive intervention than is possible with classroom-based instructional programs. Only three of the many high-quality studies of interventions using behavioral and cognitive-behavioral methods are reviewed here.

Lochman's work with highly aggressive boys is reported in a series of research articles beginning in the mid-80's. Lochman's anger-coping intervention is based on research that shows that aggressive children tend to attribute hostility to other people's intentions and to mis-perceive their own aggressiveness and responsibility for conflict. In addition to targeting specific cognitive skills (shown in the box), the intervention uses behavioral techniques (operant conditioning) to reward compliance with group rules. The program is targeted at boys in grades four through six who are identified as aggressive and disruptive by their teachers. A school counselor and a mental health professional from a Community Guidance Clinic co-lead groups of aggressive boys for 12 - 18 group sessions, each 45 minutes to an hour. Importantly, this cognitive training is augmented with teacher consultation in which the mental health professional running the children's group assists the children's regular teachers in classroom management in general and in helping the targeted youths generalize new skills to the regular classroom.

- Establishing group rules and contingent reinforcements;
- Using self-statements to inhibit impulsive behavior;
- Identifying problems and social perspective-taking;
- Generating alternative solutions and considering the consequences to social problems;
- Modeling videotapes of children becoming aware of physiological arousal when angry, using self-statements, and using a set of problem-solving skills to solve social problems;
- Having the boys plan and make their own videotape of inhibitory self-statements and social problems solving;
- Dialoging, discussion, and role-playing to implement social problem solving skills with children's current anger arousal problems.

Elements of Lochman's Anger-Coping Intervention

The effectiveness of this "anger coping" intervention was investigated in a series of studies which systematically varied features of the program to learn more about its essential elements. In one study (Lochman, Burch, Curry, & Lampron, 1984; scientific methods score=4), 76 boys from eight elementary schools ranging in age from 9 to 12 were studied. They were not randomly

assigned to experimental conditions, but pre-treatment measures showed the groups to be equivalent on the outcomes measures of interest. In comparison to aggressive boys receiving no treatment or minimal treatment, aggressive treatment group boys reduced their disruptive-aggressive off-task behavior in school ($ES = -.55$) and their aggressive behavior as rated by their parents ($ES = -.61$) directly after the intervention. A three-year follow-up study was conducted when these and some boys from other earlier studies were 15-years old (Lochman, 1992; scientific methods score=4). The study found that the intervention had a significant effect on self-reported alcohol and substance abuse ($ES = -.38$) but no significant effect on self-reported criminal behavior ($ES = -.11$). It can be argued that a reduction in delinquency of this magnitude (approximately equivalent to a 5 percentage point difference in crime rate between the treatment and control group) in a highly delinquent population is practically meaningful even if it is not statistically significant. Also, the treatment group in this follow-up study was significantly younger than the comparison group, which worked against finding program effects as younger age was associated with higher rates of delinquency.

Rotheram also demonstrated the efficacy of cognitive behavioral training in a primary prevention program for upper elementary school youths. In one study (Rotheram, 1982; scientific methods score=4) eight 4th through 6th grade classes were randomly assigned to participate in a social skills training intervention or to serve as control classes. Students in each class were randomly assigned to small training groups led by graduate and undergraduate students. A drama situation game was conducted in each group for a one-hour session twice a week for twelve weeks. Each "game" involved teaching a specific assertiveness concept to help children think, act, or feel assertive; presentation of specific problem situations; group problem solving in which the students generated alternative solutions to the problem and evaluated the solutions; and behavioral rehearsal and feedback. Although all students in the treatment classes were included in the intervention, only the 101 subjects identified (prior to the intervention) as being disruptive, under-achieving or exceptionally high in terms of comportsment and achievement were included in the evaluation. Students in the social skills training condition generated significantly more assertive and significantly fewer passive and aggressive problem-solving responses than did the control group directly after treatment, and had larger increases in their grade-point-averages over pre-treatment one year after the treatment. Teacher ratings of comportsment also improved significantly more from pre-treatment to immediately following the treatment ($ES = .42$) as well as one year after the treatment ($ES = .40$).

Interventions relying solely on behavior modification strategies have also been successful. Brewer et al. (1995) summarize two highly effective programs that monitored school attendance and provided contingent rewards for good attendance. Both studies used rigorous evaluation methods and produced positive outcomes on attendance. These results are important because truancy is an important risk factor for delinquency.

Bry's work also used behavioral monitoring and reinforcement with high risk youths. Students were randomly assigned to the treatment and control conditions in this study. Students' tardiness, class preparedness, class performance, classroom behavior, school attendance, and

disciplinary referrals were monitored weekly for two years. Students met with program staff weekly and earned points contingent on their behavior which could be used for a class trip of the students' choosing. Frequent parent notification was used. Experimental students had significantly better grades and attendance at the end of the program than did controls, but the positive effects did not appear until the students had been in the program for two years (Bry & George, 1979; scientific methods score=5; Bry & George, 1980; scientific methods score=4). Bry (1982; scientific methods score=4) reports that in the year after the intervention ended, experimental students displayed significantly fewer problem behaviors at school than did controls and in the 18 months following the intervention, experimental students reported significantly less substance abuse ($ES=-.44$) and criminal behavior ($ES=-.30$). Five years after the program ended, experimental youth were 66% less likely to have a juvenile record than were controls ($ES=-.50$).

These rigorous studies of targeted behavior modification and cognitive skill-training demonstrate clear positive effects on drug use and aggressive, anti-social behavior. Effect sizes are among the highest observed for any school-based strategy. Only Bry's work demonstrated a statistically significant reduction in actual criminal behavior (other than drug use), but the direction and size of the effect in the Lochman work provide additional support for a positive effect on criminal activity.

Peer Counseling, Peer Mediation, and Peer Leaders

Peer group counseling is popular in schools and is often used in prevention programs for at-risk youths and adjudicated delinquents. This type of counseling usually involves an adult leader guiding group discussions in which participants are encouraged to recognize problems with their own behavior, attitudes, and values. Peer pressure to adopt pro-social attitudes is expected to occur. G. Gottfredson (1987) reviewed these approaches to delinquency prevention and evaluated a large-scale school-based program which was one of several programs included in OJJDP's alternative education initiative in the 1980s. This study (scientific methods score=3, involving random assignment of subjects to experimental conditions) "lends no support to any claim of benefit of treatment, with the possible exception that the treatment may enhance internal control for elementary school students. For the high school students, the effects appear preponderantly harmful." (G. Gottfredson, 1987, p 708). Specifically, high school treatment youths reported significantly **more** delinquent behavior, more tardiness to school, less attachment to their parents, and more "waywardness," a scale measuring a constellation of anti-social attitudes, beliefs, and behaviors including rebelliousness, lack of attachment to school, low beliefs in rules, delinquency, and association with delinquent peers. The effect sizes for these differences were small (less than .05). Presumably, these interventions backfire when students are brought into closer association with negative peers during the peer counseling sessions. Gottfredson also notes that frequent discussions of parent/home issues in the groups may have led to a weakening of parental bonding and a subsequent increase in delinquency.

Peer mediation programs rose in popularity in the 1980s. These programs use students to

assist in dispute resolution when conflicts arise among students. Trained peer mediators assist in developing alternative solutions to fighting and provide an alternative to traditional interventions by a school administrator (e.g., warnings, suspensions, or demerits). Lam (1989, cited in Brewer et al, 1995) reviewed 14 evaluations of peer mediation programs. The methodological rigor of all but three of the programs was too weak to justify any conclusions about the effect of the programs. According to Brewer, none of the three studies in the Lam review employing quasi-experimental designs showed significant effects on observable student behavior (e.g., fighting, disciplinary referrals). One additional study of peer mediation published after Lam's review (Tolson, McDonald, and Moriarty, 1992; scientific methods score=3) suggested that students assigned to receive peer mediation have fewer interpersonal conflicts in the 2.5 months following the program, but the study was small and the outcome measure (referrals to the office for interpersonal conflict) was weak.

Students have also been used as peer leaders in substance use prevention programs. The rationale for this approach is that anti-drug messages will be more credible when delivered by a peer than an adult. Although some studies (e.g., Botvin, Baker, Renick, Fillazzola & Botvin, 1984; Perry, Grant, et al, 1989) have found that substance abuse prevention programs focusing on skill development are more effective when led by peers than by teachers, other studies (e.g., Ellickson & Bell, 1990) find no such advantage for peer-led programs. Tobler's (1992) meta-analysis also found no evidence that programs with peer leaders produce better outcomes than programs of similar content led by adults.

The overall patterns of results for programs involving peers in the delivery of services is not promising. Peer mediation programs are not promising, although they have not been sufficiently evaluated. These programs are likely to be ineffective interventions when implemented as stand-alone programs rather than as part of broader attempts to improve disciplinary practices. Peer counseling interventions for high-risk youths are contraindicated, and studies using peer leaders to lead substance abuse prevention programs have produced mixed results.

Counseling and Mentoring

Many studies have examined the effect of counseling interventions on delinquency. Lipsey's (1992) meta-analysis of juvenile delinquency treatment effects shows that, for juvenile justice and non-juvenile justice interventions alike, counseling interventions are among the least effective for reducing delinquency. Twenty-four studies of individual counseling in non-juvenile justice settings yielded an effect size of -.01 on measures of recidivism.

A popular form of school-based counseling is the Student Assistance Program (SAP). These programs are among the most common programs found in schools, accounting for approximately half of the expenditures of Drug-free Schools and Communities funds (Hansen & O'Malley, 1996, citing GAO, 1993) administered through the U.S. Department of Education.

These programs involve group counseling for students with alcoholic parents, counseling for students who are using drugs or alcohol or whose poor academic performance place them at risk for substance abuse, and work with parent and community groups to develop ways of dealing with substance abuse problems. Often the peers of student clients are involved as crisis managers, group facilitators, and referral agents. SAP counselor's are school-based but employed by mental health departments or other outside agencies. After surveying the scant literature on the effectiveness of SAP programs, Hansen & O'Malley (1996) concluded that evaluations are "universally absent." These programs must be evaluated if federal funding for them is to be continued.

Gottfredson (1986; scientific methods score=5), in a study sponsored as part of OJJDP's alternative education initiative, examined effects on delinquent behavior of a program of services provided to high risk secondary school students. Students' behavioral and academic problems were diagnosed, and individual plans were developed by school specialists (either teachers or counselors assigned to work individually with the high risk students for this project). Counseling and tutoring services were provided consistent with the individual plans, and the specialists also acted as advocates for the students, worked with the students' parents, and tried to involve the students in extracurricular activities to increase bonding to the school. On average, school specialists met twice per month directly with the target students and the students also participated in peer counseling and "rap" sessions with other students. Random assignment of 869 eligible high-risk youths to treatment and control conditions yielded equivalent groups. After two year of treatment, the targeted youths were significantly better off than the control students on several measures of academic achievement and educational persistence. Students were promoted to the next grade at a higher rate after the first year in the program ($ES=.15$), drop-out rates were significantly lower for students in some of the schools ($ES=.09$ overall), graduation rates were higher ($ES=.68$), and the percentage of students scoring in the bottom quartile of a standardized achievement tests scores was lower ($ES=-.19$). However, the services did not result in a reduction in delinquency. Gottfredson (1986) examined six indicators of delinquent behavior, including self-reports, school records, and police records. For only one of the measures were significant differences observed. Treatment students reported significantly **more** drug use ($ES=.23$). In all, two measures showed no difference, two favored the treatment group ($ES's=-.08$ and $-.14$) and two favored the control students ($ES's=.02$ and $.23$). The study suggests that even relatively small doses of tutoring lead to improvements in academic outcomes. It is probable that the poor showing on the delinquency measures was due to the counseling intervention which brought high-risk youths together to discuss (and therefore make more salient to others) their poor behavior.

Mentoring -- one-on-one interaction with an older, more experienced person to provide advice or assistance -- is an increasingly popular delinquency prevention strategy. OJJDP has invested \$19 million in juvenile mentoring programs, as mandated by Congress. Our review uncovered four studies of school-based mentoring (See Table 5-5). Chapter 2 reviews additional studies of community-based mentoring. The results of the studies can be summarized as follows: (1) The methodological rigor of the studies is generally poor. Only one study received a

scientific methods score of three or more, and this study did not assess the programs' effect on crime outcomes. (2) School-based mentoring programs appear promising for increasing school attendance. (3) The effectiveness of school-based mentoring for reducing delinquency and drug use is not known. See Chapter 2 for a summary of one rigorous study of a particularly well-implemented community-based mentoring program which found positive effects on substance use, bearing in mind that the results from that study may not generalize to mentoring programs run in or by schools.

In summary, counseling interventions for high-risk youths are contraindicated, and school-based mentoring programs appear promising for reducing nonattendance but have not been studied with sufficient rigor to justify confident conclusions about its effectiveness for reducing delinquency or substance use.

Table 5-5. Summary of Mentoring Studies

Author (year)	Scientific methods score/ Number of cases	Effect size for measure of problem behavior	Effects on risk and protective factors
Higgins (1978) [results for high school students returning from correctional institution after approximately one year of program]	2 N=106	Offenses, weighted by severity -- not significantly different [ES=.25 males; .23 females, favoring mentored group]	School persistence -- NS School performance -- significantly better for mentored, males only)
McPartland & Nettles (1991) [results for middle school students directly after two years of program]	3.5 N=334 (approx.)	NA	Absences -- significantly fewer absences [ES=-.18] English grades -- significantly better [ES=.14] GPA and grade promotion -- NS
Slicker & Palmer (1993) [results for 10th grade "at-risk" students directly after six months of program]	2 N=64	NA	Drop-out and GPA-- NS
LoSciuto, Rajala, Townsend, & Taylor (1996) [results for sixth graders directly after one school year of program]	2 N=562	Frequency of substance use in past 2 months -- almost significantly lower ($p=.056$) among mentored students [ES=-.22]	Days absent -- significantly fewer for mentoring group

Recreational, Enrichment, and Leisure Activities

Some programs offer recreational, enrichment or leisure activities as a delinquency prevention strategy. These programs historically have been based on one of the following assumptions: (1) "idle hands are the devil's workshop;" (2) children -- especially those who do not fit the academic mold -- will suffer from low self-esteem if they are not able to display their other competencies; or (3) students need to vent their energy. With the rise in violent crime, the typical rationale for alternative activities programs is that occupying youth's time will keep them out of harm's way -- the "safe haven" theory. Drop-in recreation centers, after-school and weekend programs, dances, community service activities, and other events are offered as alternatives to the more dangerous activities. After-school programs have enjoyed a recent boost in popularity in light of evidence that 22% of violent juvenile crime occurs between 2 p.m. and 6 p.m. on school days (Snyder, Sickmund, & Poe-Yamagata, 1996). This is more than would be expected if juvenile crime were uniformly distributed across the waking hours.

Relevant research on alternative activities is found both in basic research on the causes and correlates of delinquency and in evaluations of prevention programs involving these activities. Basic research has examined the plausibility of the "idle hands is the devil's workshop" rationale for explaining delinquency and found it lacking. Several studies have found that time spent in leisure activities is unrelated to the commission of delinquent acts (Gottfredson, 1984b; Hirschi, 1969). Time spent on activities which reflect an underlying commitment to conventional pursuits (e.g., hours spent on homework) is related to the commission of fewer delinquent acts, while time spent on activities which reflect a (premature) orientation to adult activities (e.g., time spent riding around in cars) is related to the commission of more delinquent acts. But the myriad activities of adolescents that have no apparent connection to these poles (e.g., clubs, volunteer and service activities, youth organizations, sports, hobbies, television, etc.) are unrelated to the commission of delinquent acts. Simply spending time in these activities is unlikely to reduce delinquency unless they provide direct supervision when it would otherwise be lacking.

Alternative activities programs have been found to *not* prevent or reduce alcohol, tobacco, and other drug use in several reviews of the effectiveness of drug prevention (Botvin, 1990; Hansen, 1992; Schaps, Bartolo, Moskowitz, Palley, and Churgin, 1981; Schinke, Botvin, and Orlandi, 1991). More recent evidence of the impotence of alternative activities programs comes from the National Structured Evaluation (NSE; Stool, Hill, and Brounstein, 1994), a major study of the effectiveness of prevention activities initiated in 1991 by the Center for Substance Abuse Prevention (CSAP), which examined hundreds of different program models in operation during or after 1986. The NSE found that alternative activities alone do not reduce alcohol and other drug use, alcohol and other drug -related knowledge and attitudes, or other risk and protective factors related to alcohol and other drug use. However, when these drug-free activities appeared as secondary components in programs primarily aimed at psycho-social skill development, they were effective for reducing alcohol and other drug use and related risk and protective factors. Note that the reviews and the NSE summarize evidence related to broadly-defined alternative activities programs operating in both school and community contexts. They do not tell us whether the null

Table 5-6. Summary of Recreation, Enrichment, and Leisure Activities Studies

Author (year)	Scientific methods score/ Number of cases	Effect size for measure of problem behavior	Effects on risk and protective factors
Thompson & Jason (1988) [results for eighth grade students at-risk for gang membership directly after one school year of program]	2 N=117	NA	Gang membership -- favors experimental, $p=.06$; [ES=-.16]
Ross, Saavedra, Shur, Winters, & Felner (1992) [results for low-income elementary school children directly after 144 days of program]	4 N=667	NA	Achievement test scores -- no significant difference overall Risk-taking -- significantly favors control group Impulsiveness -- significantly favors control group
Cronin (1996) [results for at-risk sixth grade students directly after one school year of program]	4 N=508	Rebellious Behavior -- NS Drug Use in Last Year -- significantly favors control group (ES=.47) Drug Use in Last Month -- NS	Grade-point average, Attachment to school, Commitment to school, Belief, Attitudes favoring drug use, Attendance -- NS

findings apply equally to programs in these different settings. Few evaluations of the effect of these recreation, leisure, and enrichment activities on delinquency other than substance use are available. They are summarized in Table 5-6. These studies all combine an emphasis on alternative activities with other components such as instruction in skills related to the alternative activity. One program (Ross et al, 1992) involved instruction and supervised homework and self-esteem building exercises in a school-based after-school program. The study did not assess program effects on actual delinquent behavior due to the young age of the children, but it did measure low self-control, a potent risk factor for later delinquency. The Thompson and Jason (1988) study reported on a gang prevention program involving instruction plus an after school program involving a sports clinic, social and recreational activities, job-skills and educational assistance. Cronin (1996) reported on a community service program which also involved reflection/discussion sessions for "processing" the service experience. As Table 5-6 shows, the results are unfavorable to alternative programs, except for one study which shows a marginally significant ($p=.06$; $ES=-.16$) positive effect on a risk factor for delinquent behavior, gang membership. The other studies suggest that these alternative activities programs may actually increase the risk for delinquent behavior.

These studies of alternative activities do not specifically address the crime prevention potential of recreational strategies such as "midnight basketball" which are designed to keep the most crime-prone segment of the population off the streets during peak crime hours (i.e., to provide a "playground for ... idle hands") and to enhance positive youth development through mandatory attendance at workshops covering topics such as job development, drug and alcohol use, safe sex, GED preparation and college preparation, and conflict resolution. These programs have received media attention and public support in recent years. Midnight Basketball was praised in 1991 by President George Bush as one of his "thousand points of light." The "Crime Bill" signed into law by President Clinton in 1994 featured alternative activities prominently among its various crime prevention strategies. Early versions of the bill included a line item for Midnight Basketball, and although the line item was eventually eliminated when it became the symbol of pork-barrel spending among conservatives in and out of Congress, alternative activities strategies still figure prominently among its prevention strategies. Midnight Basketball is mentioned explicitly as one of the preferred Local Crime Prevention Block Grant Program strategies, along with other supervised sports and recreation programs; non-school recreation strategies are included in the Ounce of Prevention Grant Program; supervised sports and extracurricular programs including arts and crafts and dancing during non-school hours are included in the Community Schools Youth Services and Supervision Grant Program; and park and recreation programs in high risk areas are called for in the Urban Recreation and At-Risk Youth Grants to local governments (Youth Today, Nov/Dec, 1994).

Midnight basketball programs are not likely to reduce crime. The evidence from meta-analyses of drug prevention programs suggests no behavioral effect of such programs, and the few studies that have examined effects on delinquency or anti-social behavior suggest no effect. The only compelling argument for continuing to consider this approach is that they may be able to provide adult supervision when it would otherwise be lacking. But research (Ross et al, 1992,

summarized in Table 5-6) indicates that programs *intending* to provide such supervision for unsupervised youth in the after-school hours may actually increase risk for delinquency. These investigators found that (1) the students most in need of after-school supervision chose not to participate in the program, (2) the program *increased* risk-taking and impulsiveness, and (3) the program worked no better for latch-key children than for children who had access to other supervision during the after school hours. These unfortunate outcomes make sense in light of other evidence (e.g., G. Gottfredson, 1987) demonstrating that interventions that group high-risk youths with lower-risk youths in the absence of a strong intervention to establish pro-social group norms often backfire. 

In summary, research clearly supports the crime-prevention potential of providing direct adult supervision of high-risk juveniles when they would otherwise be unsupervised, but designing such interventions so that they will reach the intended population and counteract potential negative effects of grouping high-risk youths remains a challenge. The chapter on community programs finds reason for guarded optimism about the crime prevention potential of after-school recreation programs operating in high-crime areas by community-based organizations such as Boys and Girls Clubs. It is possible that such programs are more effective than the more broadly defined alternative activities programs summarized here. It is also possible that features of the implementing organization and the community context within which the programs operate moderate the programs' effectiveness. Better research is clearly needed to isolate these characteristics of programs and contexts. At this point in time, expectations for these programs far exceed their empirical record. Because some studies have found backfire effects, it is particularly important to proceed with due caution. 

A Comprehensive OJP-Funded Program: Cities in Schools (C.I.S.)

C.I.S. is a comprehensive dropout prevention program which combines several individual-level prevention strategies within a broader effort to alter the school environment to facilitate the delivery of services to high-risk youths. Its breadth defies the program categorization adopted for this report. C.I.S. operates in 665 sites in 197 communities nationwide (OJJDP, 1995). It is operated by Cities in Schools, Inc., a nonprofit organization headquartered in Alexandria, VA. Regional and state-level offices bridge the gap between the national office and local programs. Regional staff are the primary providers of technical assistance and training to new and existing programs. State office functions parallel those of the regional offices.

The C.I.S. model utilizes the school as a site for service coordination and integration. It is more a strategy for service delivery than a program. It is based on the belief that the "existing human services delivery system is fragmented, categorical and uncoordinated, and that the clients of the system have multiple problems that extend beyond the relatively narrow agendas of particular agencies (Rossman and Morley, 1995)." Several different strategies are used to address the problems of youth at risk for drop out. The central feature of C.I.S. is the assignment of caseworkers to groups of problem students at inner city schools. Common strategies include: 1)

case management (often focusing on obtaining needed services such as health and dental screening, bus tickets, clothing, etc.), 2) individual or group counseling, 3) assistance with academic subjects, 4) attendance monitoring, and 5) activities to promote self-esteem and team building. A "C.I.S. class", although not required, is recommended by the national organization. No standard curriculum exists for the C.I.S. classes, but many focus on life-skills education and contain an emphasis on building students' self esteem and encouraging prosocial attitudes and behaviors. The activities are loosely structured. Tutoring and mentoring are among the most commonly provided services, but individual sites are encouraged to develop special services and arrangements according to their local needs, resources, and constraints.

Two evaluations of the C.I.S. program have been conducted. The first (Murray, Bourque & Mileff, 1981) reviews program outcomes from 1978-1980, the second (Rossman and Morley, 1995) outcomes from 1989-1991. The methodological rigor of both studies (2 and 1, respectively) falls below the cut-point established in this report for scientific credibility. Conclusions regarding program efficacy cannot be drawn based on either evaluation.

Murray et al. (1981) showed that the services delivered were not as strong as anticipated by the C.I.S. model. Rossman and Morley (1995) were unable to quantify the level of program implementation because the systematic records were not kept by the program. Analysis of drop out and absences included in the first evaluation suggested that C.I.S. did not have the desired effect on students. Analysis of absences included in the second evaluation generally showed that C.I.S. students with the most severe problems demonstrated improvement over time. Whether this is attributable to the program or to regression to the mean is not known. Analysis of drop out in the second evaluation suggested that the dropout rate for C.I.S. students compared favorably to other at-risk populations in the nation but offered no evidence about the comparability of these other populations to the C.I.S. population on other variables that would place students at risk for dropping out. An examination of the effect of the C.I.S. program on a variety of problem behaviors was included in the second evaluation. C.I.S. students are asked to report how big of a problem a behavior used to be and whether or not this has changed. Results indicated that students were more likely to experience improvement or no change as opposed to getting worse. The design (lack of comparison group, retrospective self-report) tells us nothing about the effects of C.I.S. on these behavioral outcomes.

In summary, although several aspects of the C.I.S. strategy resemble components shown in other work to have promise for reducing delinquency and substance use, the effects of C.I.S. on these behaviors is unknown because its evaluations have lacked the rigor necessary to justify any conclusions about its effectiveness. Mentoring and the "school-within-a-school" structure used in some of the C.I.S. sites are promising for reducing delinquency or substance use. On the other hand, counseling, unstructured life skills classes, and community service activities have been shown to be ineffective for reducing these problem behaviors, and grouping high-risk students together in the absence of a structured program appears to increase delinquency. C.I.S. has been successful in accessing a large number of at risk students, establishing a service delivery mechanism for them, and generating funds (both federal and other) to initiate and sustain

interventions. The programs need to be rigorously evaluated.

Scientific Conclusions

What Works? Strategies for which at least two different studies have found positive effects on measures of problem behavior and for which the preponderance of evidence is positive are:

Crime and delinquency:

- (1) Programs aimed at building school capacity to initiate and sustain innovation.
- (2) Programs aimed at clarifying and communicating norms about behaviors -- by establishing school rules, improving the consistency of their enforcement (particularly when they emphasize positive reinforcement of appropriate behavior), or communicating norms through school-wide campaigns (e.g., anti-bullying campaigns) or ceremonies; and
- (3) Comprehensive instructional programs that focus on a range of social competency skills (e.g., developing self-control, stress-management, responsible decision-making, social problem-solving, and communication skills) and that are delivered over a long period of time to continually reinforce skills.

Substance use:

- (1) Programs aimed at clarifying and communicating norms about behaviors;
- (2) Comprehensive instructional programs that focus on a range of social competency skills (e.g., developing self-control, stress-management, responsible decision-making, social problem-solving, and communication skills) and that are delivered over a long period of time to continually reinforce skills; and
- (3) Behavior modification programs and programs that teach “thinking skills” to high-risk youths.

What does not work? Strategies for which at least two different studies have found no positive effects on measures of problem behavior and for which the preponderance of evidence is not positive are:

- 
- (1) Counseling students, particularly in a peer-group context, does not reduce delinquency or substance use.
 - (2) Offering youths alternative activities such as recreation and community service activities in the absence of more potent prevention programming does not reduce substance use. This conclusion is based on reviews of broadly-defined alternative activities in school- and community settings. Effects of these programs on other forms of delinquency are not known.
 - (3) Instructional programs focusing on information dissemination, fear arousal, moral appeal, and affective education are ineffective for reducing substance use.

What is promising? Several strategies have been shown in only one rigorous study to reduce delinquency or substance use. If the preponderance of evidence for these strategies is positive,

they are regarded as “promising” until replication confirms the effect. These strategies are:

Crime and delinquency:

- (1) Programs that group youths into smaller “schools-within-schools” to create smaller units, more supportive interactions, or greater flexibility in instruction; and
- (2) Behavior modification programs and programs that teach “thinking skills” to high-risk youths.

Substance use:

- (1) Programs aimed at building school capacity to initiate and sustain innovation;
- (2) Programs that group youths into smaller “schools-within-schools” to create smaller units, more supportive interactions, or greater flexibility in instruction; and
- (3) Programs that improve classroom management and that use effective instructional techniques.

Effectiveness of DOJ Programs

With the notable exception of D.A.R.E. evaluations, the evaluations of school-based prevention programs funded by OJP are generally too weak to justify conclusions about the effectiveness of the programs.

D.A.R.E. Evaluations show that as it is most commonly implemented, D.A.R.E. does not reduce substance use appreciably. But the revised D.A.R.E. curriculum with its follow-up sessions in later grades has not been evaluated. Given the more general finding that instructional drug prevention programs are most effective when delivered over extended periods of time, a reasonable course of action would be to conduct a rigorous study to compare the revised D.A.R.E. program including its follow-up sessions with other plausible, long-term drug prevention curricula containing more social competency content. This study should randomly assign fifth or sixth grade classrooms to receive either D.A.R.E. with its booster sessions or a non-D.A.R.E. program of equal length and intensity and its booster sessions. Long-term effects should be assessed in a longitudinal study and care should be taken to ensure sufficient statistical power to detect small differences in effectiveness.

L.R.E. The national evaluation of L.R.E. was inconclusive. As detailed above, L.R.E. has theoretical promise only when the law-related curriculum is embedded in a more comprehensive program of improved classroom organization and management. A stand-alone law-related education curriculum is no more likely to reduce delinquency than a stand-alone drug education program is to reduce substance use. More rigorous evaluation is needed to evaluate L.R.E. as it is typically implemented, and to isolate the effective ingredients in the multi-component L.R.E. interventions that have resulted in positive evaluations.

C.I.S. Evaluations of C.I.S. have not been of sufficient methodological rigor to justify conclusions about its crime prevention potential. C.I.S. represents a vehicle through which a

variety of prevention services could be effectively delivered. But as currently implemented, the mix of services provided is as likely to contain ineffective as effective ones. If Congress is to continue to mandate these programs, rigorous tests of evaluations should now be conducted.

Several additional categories of school-based programs are supported from time-to-time by OJP. These include "Midnight basketball" and other recreational activities intended to reduce crime, peer mediation programs; and violence prevention curricula. A variety of after-school program models are also being developed. None of these program types have been studied with sufficient rigor to justify conclusions about their effectiveness, but some evaluations have produced disappointing results. Rigorous evaluation of the OJP-funded programs is required.

Byrne Funds. Little is known about the specific school-based programs supported by Byrne Block Grant Funding. One of the purpose areas for this funding is education, however, and \$74.7 million was spent between 1989 and 1994 for these education programs. Some of this funding is known to support local D.A.R.E. programs, known to be ineffective as most commonly implemented. The block grant program as it is currently organized might be strengthened through federal efforts to disseminate information to state and local agencies about what school-based strategies work to reduce delinquency.

Improving Effectiveness Through Evaluation and Research

The studies reviewed in this chapter have demonstrated that school-based prevention can work. With few exceptions, the different categories of prevention activities have been shown to reduce delinquency or substance abuse in at least one rigorous study. The magnitude of the effects of these strategies ranges from small (e.g., for instructional drug prevention programs and classroom management interventions) to moderate (e.g., for a behavior modification intervention and some of the more comprehensive programs such as STATUS, that combined a school-within-a-school structure with an innovative curriculum and effective instructional methods). Yet the magnitude and durability of effects of school-based prevention efforts, although at least comparable to those of delinquency prevention and treatment efforts in other settings, are low relative to the theoretical promise and anticipated potential of these programs. More important than the question of which individual strategies "work" is the question of how the promising strategies can be strengthened to improve their yield. These efforts should focus on two broad areas: Specifying theories underlying school-based prevention and improving the level of implementation of prevention programs.

Specifying theories of school-based prevention. Much school-based prevention is guided by the following general notions about the nature and causes of problem behaviors: (1) Different problem behaviors are highly related; (2) different problem behaviors share common antecedents; (3) the common antecedents are the risk and protective factors identified in research as correlates of problem behavior (e.g., as summarized in reviews such as Hawkins, Catalano, & Miller, 1992 and Loeber & Dishion, 1983); and (4) prevention efforts aimed directly at these risk and protective factors will reduce problem behavior. Specific school-based delinquency prevention

practices are often justified on the basis of demonstrated effect on one or more known risk or protective factors for delinquency.

The prevention focus on risk and protective factors is enormously popular among practitioners and has succeeded in pushing practice away from strategies with no basis in research and towards strategies with plausibility. At the same time, accumulated evidence has raised questions about the relative potency of different risk and protective factors and their possible differential effects on various problem behaviors. Some risk-based strategies show promise for reducing substance use but not other forms of delinquency (e.g., mentoring programs and the classroom organization and management strategies summarized earlier). Other programs have clear effects on aggressive behavior and school conduct problems, but the evidence for an effect on measures of criminal activity is less convincing (e.g., cognitive training strategies and social competency instruction). Many programs have large effects on academic achievement, commitment to school, or attachment to school, but no effect (Hawkins, Catalano, et al, 1992; Hawkins, Doueck & Lishner, 1988) or even negative effects (D. Gottfredson, 1986) on delinquency and substance use. Clearly, enhancing protective factors or reducing risk factors does not ensure a large reduction in delinquency. The focus on risk and protective factors has been and no doubt will continue to be a valuable contribution to the prevention field. But more productive theory-building and testing is now required to make significant progress. School-based prevention efforts would benefit from the development and testing of multi-level theories that specify how environmental features of schools interact with individual-level processes generating delinquent behavior. Efforts to clarify the causal processes linking school characteristics and schooling experiences to delinquency can be expected to lead to refined program designs which target the most potent theoretical variables.

Improving implementation of school-based prevention programs. Researchers have recently turned their attention to better understanding the conditions which may impede the implementation of prevention programs and therefore limit their effectiveness. Elias, Weissberg, et al. (1994) recommend comprehensive, multi-year, multi-component approaches over more traditional single-intervention ones. This idea is also supported by meta-analysis results showing that programs using multiple interventions work better than those using a single intervention strategy (Tobler, 1986) and by results summarized above. Some of the more comprehensive programs reviewed above (e.g., Olweus' bullying intervention in Norway schools; Gottfredson's school-capacity building interventions) are among the more potent programs for reducing delinquency. Given that the single largest federal expenditure on school-based prevention (Safe and Drug-Free Schools and Communities monies administered by the U.S. Department of Education) funds primarily narrower strategies such as student assistance programs (a form of counseling) and drug instruction, this recommendation alone, if heeded, can be expected to boost the effectiveness of school-based prevention activities.

Elias, Weissberg et al. (1994) also advocate strategies to strengthen the "host environment." These strategies include working with staffs in the schools to ensure goal consensus and fluency in the theory underlying the prevention approach, and using an action

research model to clarify expectations, monitor progress, and identify and resolve problems which present obstacles to implementation as they arise. Support for these capacity-building strategies is summarized above.

Gottfredson, Fink, Skroban & Gottfredson (1996) summarize literature on factors related to successful educational reform in general. The capacity of schools to initiate and sustain reform, and consequently the strength and fidelity of those reforms, varies considerably across geographic areas, with schools in urban areas most likely to lack the infrastructure necessary to support change. Many features of school organizations shown to be related to successful reform - quality leadership, teacher morale, teacher mastery, school climate, and resources -- are lower on average in urban than in other schools. The literature on school reform suggests that the strength and durability of school-based prevention programs can be increased by embedding specific program components within a broader capacity-building effort that attends to these larger organizational issues.

The recommended direction for school-based prevention -- towards multi-faceted, longer-term, and broader-reaching programs embedded in school capacity-building activities-- presents a challenge to researchers and policy-makers alike because the "user-friendliness" of programs is related to the fidelity of their implementation. More complex programs are more likely to be watered down or "reinvented" by school staff. Indeed, experience working with a troubled urban middle school to implement a multi-component prevention program over a four-year period (Gottfredson, Gottfredson, & Skroban, 1996) illustrated the challenge. The program included several components aimed at increasing social competency skills as well as components aimed at increasing social bonding and school success. Most pieces had been demonstrated in prior "single intervention" research to reduce problem behavior or factors leading to it, and are included among the program strategies that "work," summarized above. The five-year study tested the transportability of these intervention strategies into a more comprehensive program that could be implemented in a natural school setting as part of a multi-year school-based prevention demonstration. The evaluation of the five-year effort showed that the program never reached its expected level of implementation and no reliable effects on youth behaviors or attitudes were observed. The organization proved incapable of absorbing this ambitious program.

The question of what it will take to initiate and sustain meaningful change in schools is the highest priority question for researchers and policy makers at this time. We know from research summarized in this chapter that a variety of strategies can reduce delinquency or substance use. But the conditions under which much of the research -- particularly the research on individually-focused interventions -- was conducted do not resemble real-world conditions in schools where programs are most needed. Tobler (1992) shows, for example, that among the top ten most effective drug prevention programs identified in the literature, only one was implemented by classroom teachers, and even that intervention was unusual because extraordinary amounts of training and consultation was provided for the teachers. When school-based programs are implemented under less than ideal conditions results have not been as positive. In a study of Hispanic students in eight urban schools in the New York area, Botvin, Dusenbury, Baker, James-

Ortiz, & Kerner (1989), reported that the amount of the L.S.T. program material covered by teachers ranged from 44% to 83%. When the experimental sample was divided into high implementation (with a mean completion rate of 78%) and low implementation (mean of 56%), positive effects of the program were found only in high implementation group. This accords with more general findings from Lipsey's (1992) extensive meta-analysis of prevention and treatment programs which found that programs delivered by researchers were more effective than those delivered by the typical practitioner, presumably because researchers attended more to issues of strength and integrity of program implementation.

These facts must be understood if we are to strengthen prevention programming. Several of the studies summarized above (e.g., Botvin et al, 1995; Gottfredson, Gottfredson, & Hybl, 1993; Johnson, 1984) reported effects separately for groups of schools or teachers that differed on the strength and fidelity of program implementation. The evidence always suggests that more delinquency is prevented when strategies are implemented with greater fidelity over prolonged periods and that these conditions are met more easily in some schools than in others. Additional research is now needed to increase our understanding of how the potential of strategies we already know about can be realized in real-world settings.

An example of a comprehensive, theory-based, well-implemented school-based intervention. A recent example of a school-based intervention to reduce conduct disorder that addresses the shortcomings of prevention programming summarized earlier is the FAST Track (Families and Schools Together; Conduct Problems Prevention Research Group, 1992) Program, currently being tested in four cities with support from the National Institute of Mental Health. The program was developed by a consortium of social scientists on the basis of developmental theory about the causes of conduct disorder in children and previous evaluations of specific, theory-based program components. It integrates five intervention components designed to promote competence in the family, child, and school and thus prevent conduct problems, poor social relations, and school failure -- all precursors of subsequent criminal behavior -- during the elementary school years. The program involves training for parents in family management practices; frequent home visits by program staff to reinforce skills learned in the training, promote parental feelings of efficacy, and enhance family organization; social skills coaching for children delivered by program staff and based on effective models described earlier; academic tutoring for children three times per week; and a classroom instructional program focusing on social competency skills coupled with classroom management strategies for the teacher. The program therefore includes several of the most effective school-based strategies summarized earlier as well as the most effective strategies from the family domain.

The participating schools and families work closely with the research team to implement the program in a strong fashion and support its evaluation. Only preliminary data are available from the rigorous evaluation of this ongoing project. Dodge (1993) reported that after one year of this intensive program, clear positive effects were evident on several of the intermediate behaviors targeted by the program (e.g., parent involvement in the child's education and child social-cognitive skills) and significantly less problem behavior ($ES = -.25$) was recorded by trained

observers for the treatment than for the comparison children. These positive results for such a difficult population are encouraging and attest to the need for more comprehensive, theory-based, preventive interventions implemented with careful attention to strength and fidelity. The cost of such high-quality program development is high compared with typical expenditures on program development and evaluation for OJP programs: FAST Track's budget exceeds \$1 million per year for each of the four program sites.

These comments are intended to stimulate thinking about what Congress and OJP can do to contribute to the development of stronger school-based delinquency prevention efforts. Specific recommendations for strengthening programs are:

1. Increase Congressional appropriations for school-based prevention activities. OJP funding for school-based crime prevention is meager compared with its expenditures in other domains within OJP and compared with expenditures by other agencies on school-based prevention. Total expenditures on school-based prevention (partially summarized in Table 5-1) are less than \$25 million per year⁹, compared with \$1.4 billion for the extra police programs and \$617 million for prison construction. This limited investment in school-based crime prevention, in light of its promise demonstrated in this chapter, represents a lost opportunity for preventing crime.
2. Support multi-year prevention efforts (e.g., programs that span the elementary school years, the middle school years, and the high school years rather than single-year programs);
3. Support multi-component prevention efforts that include the environmental-change and individual strategies that have been shown to work in some settings under some conditions and whose positive results have been replicated:
 - (a) Programs aimed at building school capacity to initiate and sustain innovation;
 - (b) Programs aimed at clarifying and communicating norms about behaviors;
 - (c) Comprehensive instructional programs that focus on a range of social competency skills (e.g., developing self-control, stress-management, responsible decision-making, social problem-solving, and communication skills) and that are delivered over a long period of time to continually reinforce skills; and
 - (d) Behavior modification programs and programs that teach "thinking skills" to high-risk youths.
4. Reduce funding for program categories (counseling students for delinquency prevention, alternative activities such as recreation and community service activities in the absence of more potent prevention programming for drug prevention, and instructional

⁹ This figure does not include Byrne Block Grant monies, some of which fund local D.A.R.E. programs. But even with the Byrne funds, expenditures on school-based prevention are meager.

drug prevention programs focusing on information dissemination, fear arousal, moral appeal, and affective education) known to be ineffective.

5. Support activity to disseminate information about effective and ineffective school-based strategies to practitioners and to local- and state-level program managers and policy-makers.

Additional recommendations for evaluation and research needed to improve the effectiveness of school-based prevention include:

1. Require (and provide the substantial financial investment to enable) rigorous evaluation of the long-term multi-component models recommended above, insisting that studies of the effectiveness of strategies aimed at altering school and classroom environments be conducted using schools or classrooms as the unit of analysis, and testing the generalizeability of effects across different types of communities.
2. Support replication studies of the promising strategies identified in the summary section above;
3. Support theory-building and testing efforts which seek to clarify the causal models relating school experiences and delinquency;
4. Support research to investigate school conditions conducive to high-quality implementation of prevention programs; and
5. Support the development and rigorous testing, especially in urban areas, of strategies designed specifically to improve the level of implementation of prevention programs.

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Chapter Six

LABOR MARKETS AND CRIME RISK FACTORS

by Shawn Bushway and Peter Reuter

I. INTRODUCTION

Employment and crime have a complex relationship. For an individual, they can be substitutes or complements. For example, some people choose crime rather than legitimate work because of an expectation that they can make more money from crime and/or because they find it more rewarding in other ways (Katz, 1989; Bourgois, 1995). On the other hand, the workplace can offer opportunities for certain kinds of crimes that are more difficult to commit elsewhere, such as theft of inventory or selling of gambling services.

The relationship between employment and crime at the community level the relationship is equally ambiguous. Crime in a community is the outcome of the intersection between the propensity to commit a crime and the opportunity to commit a crime. For example, in a given community over time, high employment may be associated with reduced presence of residents and greater wealth, thus increasing criminal opportunities. On the other hand, low employment also provides better legitimate work opportunities for potential offenders, thus reducing their propensity to commit crime. Looking across communities, one can see the same potentially countervailing influences; poor communities offer weak job prospects but also (except for drug markets) financially unrewarding criminal opportunities. At this level, crime rates may depend not on the level of employment but on a much more fundamental set of social and individual characteristics.

Pure theory is not likely then to provide guidance about the strength or direction of the relationship between employment and crime. However it is at least plausible that a strong negative relationship exists. At the descriptive level, those who commit crimes tend to be out of the labor force or unemployed. The communities in which crime, particularly violent crime, is so heavily concentrated show persistently high jobless rates. Increasing employment and the potential for employment for individuals and communities currently at high risk of persistent joblessness may have a substantial preventive effect on crime. Thus a comprehensive assessment of crime prevention programs should include those aimed at increasing employment.

Our review includes any program which aims to increase the employment of individuals or populations at risk of serious criminal involvement. We exclude general economic stimulus policies, (e.g., looser monetary policy aimed at lowering interest rates) though these may in theory reduce crime; such policies are driven by other factors and in any case the evidence on the aggregate relationship between employment and crime is very ambiguous. We include, however, a range of community and individual programs which do not specifically target crime, as

indicated by the frequent omission of crime, or even risk-factors for crime, as an outcome measure. Thus much of this review assesses just how well such job-training and creation programs, distinct from those aimed at criminal-justice-involved offenders, actually do at increasing employment for the targeted community or individual. The crime consequences are inferred from our review of the relationship between employment and crime at various levels.

For policy purposes the reciprocal relationship of crime and employment presents a major challenge. Areas of high crime are unattractive for investment. Both property and personnel are at risk; goods are stolen, premises damaged, employees assaulted and customers intimidated. Attracting capital requires a reduction in crime so as to allay the legitimate concerns of investors/employers. On the other hand, crime reduction on a large scale may require the creation of employment opportunities for the large numbers of young adults that are the source of so much of the crime in the area. At the same time, many offenders lack the skills needed to obtain and retain attractive jobs, that is positions that pay enough to avoid poverty (well above the minimum wage for a two-parent, two-child household with only one wage earner) and which offer potential progress and a sense of accomplishment. Thus improving their work force skills may be essential even when capital can be attracted into the community.

Existing programs aimed at reducing crime through employment and/or increasing employment in high crime areas fall into the following two main categories:

- Supply-side programs aim to improve the attractiveness of individuals to employers. Mostly these programs increase the potential productivity of the worker through education or job training. However the category includes programs that take account of the fact that many high risk individuals are handicapped by their location. These programs move people to jobs, either by transportation subsidies or by actually providing access to housing in lower crime communities nearer areas of high employment potential. The latter also may have crime prevention effects by allowing children to grow up in communities with more employed adult role models.
- Demand-side programs aim to reduce the costs of employment borne by the employer. One way to do this is through wage supplements or subsidized bonds (insuring the employer against theft by the employee) for ex-offenders. Another alternative is community development programs which lower costs for businesses locating in particularly needy communities. The influx of capital into communities characterized by low employment and high crime should generate jobs and thus, by a variety of mechanisms, reduce crime in the community.

Section II briefly surveys the theoretical and empirical literature on the relationship between crime and employment at various levels. Sections III and IV survey supply and demand side programs. Each examines the evaluation evidence on program outcomes: For only a very few evaluations do we have explicit findings on the crime consequences of the intervention; the rest providing only employment measures. Section V then offers an integration of all these findings and Section VI offers conclusions and recommendations.

II. THE RELATIONSHIP BETWEEN EMPLOYMENT AND CRIME

The relationship between crime and employment has been a long standing issue in research, involving a range of paradigms.¹ Fagan (1995) and Freeman (1995) provide recent reviews, particularly focused on understanding how the returns from crime and legitimate work jointly affect the decision to engage in crime. We propose here to give more attention to the multiplicity of relationships between the criminal participation and work opportunities that operate at different levels (individual and community) and at different points in an individual's life-span (school, young adult, adult). Our goal is not to make theoretical contributions but to give a better grounding to an analysis of programmatic and policy options.

Theoretical Perspective

Fagan (1995) and Uggen (1994) have identified four major theoretical explanations for the link between employment and crime: economic choice, social control, strain, and labeling theory.

Economic choice theory (Ehrlich, 1973) posits that an individual makes choices between legal and illegal work based partly on the relative attractiveness of the two options. Moral values still influence actions but are assumed not to change with economic factors. It is, like economic theory generally, about response to changes or differences. If legal work becomes less rewarding or if illegal work becomes more rewarding, individuals may shift to crime and away from legal work. Education plays a role in framing choices; low educational attainment, which now puts young males at risk of frequent periods of unemployment and of achieving only low paying and unsatisfactory jobs, will be associated with high crime participation. This is exactly what Freeman claims happened in the late 1980's: "Given the well-documented growth of [legitimate] earnings inequality and fall in the job opportunities for less-skilled young men in this period, and the increased criminal opportunities due to the growth of demand for drugs, the economist finds appealing the notion that the increased propensity for crime is a rational response to increased job market incentives to commit crime." (Freeman, 1995:177-178.)

Notice that within this theory, the crimes in question are income-generating crimes which are used to replace income gained from legitimate means. The theory offers no account of non-income generating crime. Much violent crime is expressive (e.g., an enactment of drunken anger) rather than instrumental (e.g., aimed at ensuring success of a robbery). However economic theory is not entirely silent on violent crime. Employment should raise the opportunity cost of incarceration (i.e. what the individual loses with his freedom), both through loss of earnings and the loss of work experience; this might deter acts that endanger the individual's freedom.

¹ Employment, like crime, has many dimensions. Jobs vary in wage rates, work satisfaction, and duration. Measured correlation between employment rates and crime may be confounded by failure to measure variation in job quality adequately.

The economic choice framework allows individuals to engage in both legitimate work and crime simultaneously; this is appropriate as most offenders also maintain some relationship to the workplace over their criminal careers (Reuter et al., 1990). What may be affected by changes in the relative attractiveness of crime and legitimate work is the allocation of time between the two types of income generating activities; better employment opportunities reduce the fraction of time going to crime. Importantly, this theory has further implications beyond a simple contemporaneous choice of legal versus illegal work. The individual, particularly in adolescent years, also has to decide how much to invest in human capital (education and other workforce relevant skills). If the legal labor market opportunities appear weak, a youth is less likely to make adequate investment in acquiring the human capital necessary for success in the legal labor market. As a result, this theory can explain both participation in income-generating crime and under-investment in human capital which reduces legitimate income later.

Control theory claims that employment exerts social control over an individual (Gottfredson and Hirschi, 1990). The absence of employment for an individual leads to a breakdown of positive social bonds for that individual. That in turn is hypothesized to induce the individual to increase his criminal activity, both violent and income related. This theory, expanded naturally to cover not just individuals but areas, is a key part of William Julius Wilson's analysis of inner city problems. Using a series of carefully constructed studies of poverty areas in Chicago, he claims "many of today's problems in the inner-city ghetto neighborhoods - crime, family dissolution, welfare, low levels of social organization and so on are fundamentally a consequence of a disappearance of work" (Wilson, 1996: xiii). Employment is seen as the main builder of pro-social bonds and institutions in a community and its absence results in large scale disorder.

Anomie is another more aggregate level theory (see Uggen [1994] for a concise summary targeted to this issue). This theory suggests that frustration caused by income inequality and other aggregate level problems will cause individuals to resort to crime out of frustration.

One small area of theory that explicitly includes the idea that crime itself could be criminogenic is *labeling theory* (Lemert, 1951). Individuals who participate in crime acquire stigmatic labels (both to others and to themselves) and are then denied opportunities because of these labels. What is intriguing about this theory is that it suggests the very real possibility of feedback between employment and crime. This feedback suggests that cessation from crime will be difficult once criminal activity has been initiated, particularly if the offender acquires an official record (see Schwartz and Skolnick [1964], Nagin and Waldfogel [1994, 1995], Bushway [1996]).

Labeling theory points also to a community level connection between crime and employment- joblessness in an area may be caused by past criminal activity of the residents, as well as the converse. In a sense the community or area is "labeled", which makes it difficult for the community to attract investment. This is a point first made forcefully by former NIJ Director James K. Stewart (1986).

These theories, potentially complementary, point to important potential feedback between crime and unemployment. Programs aimed solely at improving an individual's employability (motivated by economic choice) or solely at increasing the number of jobs in an area (motivated by all four theories) are vulnerable, the first to the failure of program graduates to find jobs and the second simply to the difficulty of achieving the goal of providing jobs. In the extreme case, a community including many individuals with low human capital, limited ties to positive social structures and institutions, and negative labels is likely to be characterized by both high crime and low employment, with complex interaction between the two problems. Theory suggests that areas characterized by both high crime and low employment require attention to all three factors: weak social institutions, low human capital and negative labels.

Research on Crime and Employment

We now review empirical research aimed at assessing the relationship between crime and employment², a necessary bridge between the theories and the program evaluations. This research has been conducted at many different levels of aggregation, including national time-series data, state and local cross-sectional data and individual-level data.

National level. A review by Chiricos (1986) finds that most national level analyses have yielded weak results on the crime-employment relationship. Freeman (1994) claims that this is primarily because of the weakness in the time-series statistical model with national data. One exception is a paper by Cook and Zarkin (1985). They report mixed results from an analysis of business cycles from 1933 to 1982. In general, crime has increased over the last 50 years. However, homicide rates did not vary systematically with the business cycle while the rate of increase in burglary and robbery has been higher during the economic downturns than during the upturns. This is consistent with the idea that low employment leads to an increased propensity to commit property crime while violent crime is driven by other factors. At the same time, they found that auto-theft was actually pro-cyclical--- auto-theft increased faster when the economy improved and more slowly when the economy declined. This is consistent with the idea that the opportunity for auto-theft increases when employment (and hence disposable income) increases. We shall present no other findings at this level of aggregation because it seems to provide least insight into those policy issues with which we are particularly concerned.

Community Level Chiricos does find, however, that at lower levels of aggregation (states, counties and cities) roughly half of all reported studies show a positive and statistically significant relationship between employment and crime, using post-1970 data³. The fraction of positive results increases to almost 75 percent of all studies when property crimes are analyzed separately from violent crimes.

²We focus here on employment measures rather than unemployment because in many areas the problem is less formally defined unemployment than low labor force participation rate. In the face of persistent unemployment, discouragement may lead to drop out even from job search.

³ This may reflect the higher quality of post 1970 data, itself a consequence of the activities of the Law Enforcement Assistance Administration and the investment in computers, among other factors.

Individual level Analyses of individual level data have attracted more attention as these data have become available. Studies of the 1945 Philadelphia birth cohort have shown that unemployment is associated with crime (e.g., Wolfgang, Figlio, Sellin, 1972), a finding that is reported in numerous other studies. However the causality is uncertain. Sampson and Laub (1993) argue that employment per se or by itself does not reduce crime or increase social control; it is only stability, commitment and responsibility that may be associated with getting a job that has crime reducing consequences. Gottfredson and Hirschi (1990) argue that the relationship is essentially spurious, reflection of a common third factor which they call the level of individual social control.

Economic choice theory is further supported by evidence showing that human capital influences earnings, and earnings influence recidivism by ex-offenders (Needels, 1996). Social control theory seems to have relevance, too, within the context of economic choice. Farrington et al. (1986) tie crime more directly to employment by examining the timing of crime and employment over almost 3 years for a sample of teenage males in England. They show that property crimes are committed more frequently during periods of joblessness. However, this relationship held only for those who were predisposed to crime (as reflected by self-reports on earlier criminal activity and moral values); otherwise spells of joblessness did not induce more criminal offending.

This brief review establishes that researchers have measured a relationship between crime and employment, and that a number of mechanisms, operating both at the individual and community level, may explain the relationship. The key remaining question is whether or not programs aimed at increasing employment for at-risk populations can attain that goal and reduce crime.

III. SUPPLY SIDE PROGRAMS

Job Training and Education

The earliest labor market-oriented crime prevention programs followed just this logic – providing legitimate employment or employment skills to at-risk individuals would reduce their criminal participation. Numerous programs were developed to provide basic education, vocational training and work experience for youth in high crime and high unemployment communities. The federal government spends large sums (\$2.5 billion in 1994⁴) on skills-developing programs aimed at increasing the employment prospects of individuals who are at high risk of being persistently unemployed. Most of these interventions target youth, particularly adolescents, on the reasonable assumption that early interventions have higher

⁴ It is difficult to classify all job training programs in terms of our programmatic interest. For example, Job Training and Partnership Act (JTPA)-Title IIA (\$1 billion in FY 1993) is aimed at economically disadvantaged adults; some of those adults may be involved with the criminal justice system and others may still be young enough to be reasonably classified as “youth” but many may be at slight risk of serious criminal involvement. Given the large number of other JTPA Titles that were more directly targeted at disadvantaged youth, we did not include any of Title-IIA.

pay-off if successful. The other large set of interventions targets those already involved with the criminal justice system, since they are also known to have low human capital.

We will consider these two groups of interventions separately, since the division corresponds to differences in institutions and outcome measures. The programs for youth generally are provided by social service agencies while those for offenders frequently occur in correctional settings. Moreover criminal justice program evaluations almost always include recidivism as an outcome measure, and sometimes do not include employment, while the general population programs always include employment as an outcome measure but rarely crime. Programs are further divided into those aimed at youth, broadly defined, and those aimed at adults; these have different theoretical justifications and programmatic content.

Job Training Programs Connected to the Criminal Justice System

Introduction

Targeting human capital development programs at offenders while in, or just leaving, the criminal justice system has the merit of focusing resources on the highest risk group. It is a human services equivalent of Willie Sutton's famous line about the banks; in this case, we are going where the crime is. Like Sutton's strategy, it also has an obvious weakness; just as banks are well guarded, so offenders in the criminal justice system have already developed behavior patterns that are difficult to reverse with educational programs.

We divide programs by age of the target population: juvenile and adult. That reflects the fact that juveniles seem most suitable for programs that focus on the development of human capital, as is true of education generally; adult programs give more emphasis on reintegration into the workforce. We will also distinguish programs by whether they are in prison or post-release.

Juvenile Offenders⁵

Young offenders are confined in institutions which generally give more emphasis to rehabilitation than do adult correctional facilities. Education and training programs frequently fit into a broad array of habilitation and rehabilitation services generally. Indeed, it is difficult to identify the main effects of these programs alone, precisely because they are imbedded into a bigger set (e.g., cognitive therapy, substance abuse treatment) which may interact with education and training.

Generally the findings are of negligible or modest effects; see Table 6-1. All evaluations point to a problem getting participants to complete the program once started; high drop out rates indicate either that the program was poorly implemented or it was unattractive to many of the participants. Some of the programs also involved a very low level of services for the clients; even if they were well done it would seem implausible that they could have large behavioral consequences.

⁵ We identify the targets as offenders rather than ex-offenders because in fact what is known is that they have committed a crime. The ex-offender status is a goal rather than a description.

TABLE 6-1
Criminal Justice System Programs

Studies	Scientific Method Score (Number of cases Treatment/control)	Description of Intervention and Findings
YOUTH		
Greenwood & Turner 1993, Paint Creek Youth Center	5 (73/75)	PCYC offers a comprehensive array of intervention services and activities including counseling, peer support and skills training. One year follow-up data showed no significant differences in arrests or self-reported delinquency between experimental and control groups.
Lattimore, et al. 1990, Vocational Delivery System	5 (154/130)	VDS involved the use of vocational skills training, job readiness, and employment skills training. 36% of the experimental group, compared to 46% of the control group, were re-arrested following release (statistically significant $p < .10$).
Leiber & Mawhorr 1995, Second Chance program	3 (57/56)	Rehabilitative strategy that uses social skills training, pre-employment training, and job placement opportunities (4 months). Youths who received the treatment intervention are as likely to be involved in official offending as are the equivalent matched comparison (37% compared to 29%).
Piliavin & Masters 1981, Supported Work	5 (2200 ex-offenders 1400 ex-addicts 1200 youth)	Low-skilled and low-wage rate jobs provided for participants for no longer than 12-18 months. Found little effect on delinquents' post-program employment or on their criminal activity after program participation; for adult offenders and drug addicts, especially those over 35, increased employment and reduced crime effects were found.

ADULTS		
Adams, et al. 1994, PERP	3 (5608/ 8001)	Participation in academic and vocational programs bore no relation to reincarceration; the % of inmates who were returned to prison did not vary significantly across groups of program and non-program inmates.
Berk, et al. 1980, TARP	5 (775/200)	Intervention included the eligibility for unemployment benefits at several levels of the alternative of job counseling. Membership in any of the three experimental groups eligible for payments of job counseling had no statistically significant impact on either property or non-property arrests.
1976, Baltimore LIFE	5 (216/ 216)	Treatment groups received either income maintenance(3 months), job placement or both. Financial aid treatment groups were re-arrested for property crimes 8.3% less (statistically significant) than control and job assistance groups; they were re-arrested 7% less for other crimes (not statis. sign.)
Finn & Willoughby 1996, JTPA	3 (521/734)	Findings suggest that ex-offender status had no effect on employment at termination or follow-up; only the barrier of being long-term unemployed negatively influenced prospect of employment.
Hartmann, et al. 1994, KPEP	3 (156)	Treatment included employment skills classes, job club peer support, life skills and GED training. Offenders who successfully completed the program were significantly less likely to recidivate than those who did not (felony arrest $p<.004$; any arrest $p<.005$).
Henry 1988, CADD	3 (34/56)	Provided inmates with job training and skills along with substance abuse counseling. No difference found between industry working inmates and non-industry inmates with regard to the proportion of disciplinary reports per month in prison.
Home Builders 1996, TRADE	1 (219)	Involves an 8 week pre-apprenticeship carpentry training program for incarcerated adult offenders. Well over half of program graduates were placed in related jobs in 4 out of the 5 sites; 3 month. recidivism results (7.3%) are consistent or better than those of other vocational programs.
Maguire, et al. 1988, PIRP	3 (399/497)	Intervention involved participation in prison industry for at least 6 continuous months. After controlling for differences between the two groups, the recidivism rates for industry and non-industry participants were virtually identical.
Menon, et al.	3	RIO provides services such as educational and vocational training pre-release and job

1992, Project RIO	(Evaluation not clear)	search and placement assistance post -release. It also uses vouchers from the Targeted Jobs Tax Credit program and federal bonding as special incentives for prospective employers. Positive and significant impact on employment and negative and significant impact on recidivism, particularly for the high risk offenders.
Piliavin & Gartner 1981, Supported Work	5 (1117/1194)	Strong positive effect of program participation on ex-offender employment declines over time until the experimental-control differential in hrs. worked per month has disappeared (1 yr); no recidivism impact.
Saylor & Gaes 1996, PREP	3 (over 7000)	Treatment group had either worked in prison industry, or had received in-prison vocational instruction. Long-term findings (8 yrs.) show that male prison industry subgroup had 20% longer survival times (time before committing new offense) than comparison group; training program subgroup had 28% longer survival times: both results are statistically significant.
Spencer 1980, Ex-Offender Clearinghouse	4 (478/478)	Treatment involved career counseling, job placement, and special counseling services. Ex-offenders enrolled in the Clearinghouse program were significantly more likely to obtain employment and/or constructive activity than those not enrolled.
Van Stelle 1995, STEP	4 (89/42)	Provides in-prison training, as well as post-release transition services such as job placement assistance. There were no significant differences between graduates and controls with regard to arrest after release.
Vera Institute 1972, Manhattan Court Employment Project	4 (214/91)	Offers counseling and vocational opportunities such as job training or academic placement for a period of 90 days in lieu of tradition court disposition. During the initial 23 months of operation, the re-arrest rate for the successfully dismissed group was about 50% less than that of the terminated or control groups ($p < .01$). No reported results for entire treatment group vs. control.
Baker and Sadd 1981, Court Employment Project	5 (410/256)	Offers counseling and vocational opportunities such as job training or academic placement for a period of 120 days in lieu of traditional court disposition. There was no difference in recidivism between the treatment and control groups initially, after 12 months or after 23 months.

For example, Lattimore, Witte and Baker (1990) report a randomized control trial, one of the few in the literature, for 18-22 year old offenders in two North Carolina prisons. We classify this as a juvenile population because the subjects are indeed early in their post-school careers but note that they have been serving time in adult correctional facilities. 295 inmates were enrolled in a Vocational Delivery System (VDS) aimed at identifying vocational interests and aptitudes, providing appropriate training for the individual and then helping with post-release employment. Subjects were picked from all inmates in the two institutions who were aged 18-22, committed for property offenses, had IQ no less than 70, were in good health and within 8 to 36 months of an in-state release. Data were available for 154 of the experimental and 130 of the controls at approximately the two-year mark.⁶

No employment results were reported; thus the impact of the program on workplace performance must be inferred from the impact on crime. But “(t)hose participating in the program were more likely than control group members to complete vocational training and other programs. . . . VDS participants were less likely to be arrested following release from prison.” (p.117) At 24 months the control group showed a 50 percent recidivism rate (based on arrest records) compared to 40 percent for the experimental group. The difference was only weakly significant (10 percent level) and barely that for tests on other outcome measures. This relatively large effect exists even though only 18% of the people assigned to the VDS program actually completed the program. The completers (i.e. those who received all the services included in VDS) were substantially less likely to be arrested. This combination of high dropout and excellent results for completers is typical of other programs that strive to challenge enrollees. The problem is that researchers do not know whether or not the program completers are the same people who would have succeeded in the absence of the program - therefore looking only at the program graduates leads to selection bias. On the positive side, this study provides evidence that vocational programs aimed at young property offenders could have positive outcomes if implementation and participation problems could be resolved.

Piliavin and Masters (1981) report similar weak findings for youth enrolled in the “Supported Work” program, using a randomized assignment of 861 youth (average age 18) in five sites. The program lasted 12-18 months and provided work experience along with a stipend in a sheltered work environment. Although this program was not officially run through the criminal justice system, we include it in this section because two thirds of the youth had an arrest before entry into the program and 28 percent had been incarcerated, for an average of 20 weeks; they were predominantly Black (78%) and Hispanic (16%).

Both employment and official criminal justice outcomes were reported. The labor market outcome differences were non-significant and small; e.g., at 36 months the experimental group worked 83.3 hours per month, compared to 75.8 for the control group. The crime differences were weakly significant (10 percent level). At 27 months, 30 percent of the experimental group had been arrested, compared to 39 percent of the control group; the difference was larger and had

⁶ Differences in release date meant that a uniform follow-up period would have excluded significant periods of post-release exposure for some participants.

greater statistical significance for those without prior arrest. Although this effect size is relatively large (a 30% difference between controls and experimentals more than 2 years after the program ended), the evaluators concluded that there was no evidence of an effect for youth. As in the VDS case, the evaluators point to failure of most participants to complete the program as one of the sources of error in the study.

Other programs tended to have fewer resources, and the evaluations have weaker designs. Leiber and Mawhorr (1995) used a variety of matched control groups to assess the impact of the Second Chance program on youth who were in court but not yet sentenced to an institution. Second Chance involves 16 weekly group meetings aimed at developing certain social skills, along with a pre-employment training program (including how to conduct an independent job search, interview for a job and demonstrate good work habits). With 85 program entrants (only 57 of whom completed it), the test does not have much statistical power. The findings were of no significant differences in official arrests; the control group actually showed lower recidivism than the experimental group (completers or drop-outs). Again the evaluation pointed to the lack of treatment integrity. Note that this program also involved more than just training and education.

A recent OJJDP review of correctional educational programs noted the lack of rigorous evaluation of juvenile vocational education programs within the criminal justice system (OJJDP, 1994).⁷ The one "rigorous" evaluation cited by OJJDP is the New Pride program in Denver. New Pride is a community-based program that provides a year of intensive non-residential treatment and training, including participation in an on-site business run by the program. The evaluation consisted of tracking the success of the program participants without any comparison group. This is a poor evaluation design that does not meet minimal standards (less than a "1" on our scale). Widespread replication of this program, while encouraged by its evaluators (James and Granville [1984]), does not appear to be justified by the quality of the evaluation.

Adult Offenders

Though both theory and political rhetoric emphasize juveniles as the most suitable targets for training and education, a large fraction of adult offenders in the criminal justice system have poor educational and job market records. That fact was the original source of interest in the early 1960's in assessing whether recidivism might be reduced by providing these adults with additional educational and job skills. Moreover the life course model of crime suggests that many offenders may be more receptive to work than adolescents.

Secondary reviews from the early 1970's, after these programs had been around for roughly 10 years, were uniformly negative. The Department of Labor's Manpower Administration sponsored research on these programs, and provided a comprehensive review of the research in 1973 (Rovner-Pieczenik, 1973). Despite strong commitment and great enthusiasm by program operators, the study reluctantly reports that very few programs led to a

⁷ Note once again that the VDS and Supported Work programs cited above are not technically part of the juvenile CJS.

substantial decline in recidivism. By way of explanation, the report highlights problems in persuading correctional institutions to focus on education and post-release objectives. The report also highlights the great educational deficits of the offenders, who are generally high school dropouts reading several years below grade level with no discernible job skills. The author concluded "that we entertain no fantasies about the degree of change which manpower projects for the offender can help to bring about. Some offenders will remain unemployed and unemployable no matter what programs are available." (Rovner-Piecznik, 1973:77)

These disappointing conclusions were communicated to a much broader audience with Martinson's (1974) widely read review of 231 rehabilitative (including employment-based) programs. Martinson concluded that "with few and isolated exceptions the rehabilitative efforts that have been reported so far have had no appreciable effect on recidivism" (p.25). This report has often been held responsible for the decline of the rehabilitative model in corrections (see the chapter on Corrections in this volume) and has limited the research done on these programs.

The sheer numbers of offenders, however, have led correctional officials to continue their efforts to curtail recidivism by reintegrating ex-offenders into the workforce. We found only one recent secondary review of adult offender prison educational programs (Gerber and Fritsch 1993), which (unsurprisingly) is explicitly oriented at rebutting the pessimism of Martinson. Most of the evaluations reviewed compare program enrollees with a matched comparison group of people who did not enroll in the program. These evaluations are subject to selection bias, since people who enroll in the programs are likely to be more motivated than those who do not enroll. These motivated people might be expected to do better even without training programs.

Given this caveat, the review found that three out of six studies of pre-college education programs consisting of classroom education had a negative and significant (but small) impact on post-release recidivism. Three out of four programs showed a statistically significant increase in post-release employment. Four out of six college education programs (again primarily classroom education) showed a statistically significant decline in post-release recidivism, although the effect was small, and there is no evidence that college education leads to increased employment outcomes. Finally, four out of six studies found that vocational education consisting of participation in training and prison industry programs leads to a decline in post-release recidivism. Only two out of four studies showed that vocational education actually led to improvement in post-release employment outcomes. In fact, the one study that had some random assignment (Markley 1983) showed that vocational education had no effect on post-release recidivism or employment. The report concludes that while the evidence is mixed (and therefore encouraging), better evaluations which control for selection bias are needed.

Our own review of these programs found that it is difficult often to tell exactly what is involved in a program. For example, one of the better studies of prison industry programs was done by the U.S. Bureau of Prisons (Saylor and Gaes, 1996), following 7,000 individuals. Inmates were considered to have participated in the program if they had participated in industrial work within the prison, or had received in-prison vocational training or apprenticeship training. This program participation is so broad that it is hard to determine which program or program

element led to the observed 35% decline in re-arrests (by federal authorities only) for program participants relative to the control group. On the plus side, this seems to be clear evidence that vocational education in federal prisons helps to reduce crime. This is an important positive contribution. However, the lack of precision makes replication in other prison systems difficult. What program worked, and did it work by increasing employment⁸?

This study also highlights the problem of selection bias. When program participation is open to everyone with no restrictions, it becomes difficult to claim that the non-participants are identical to the participants even if regressions are used to control for observed differences between the groups. Unobserved differences in motivation could account for much of the resulting change in behavior, otherwise attributed to the training/vocational program.

We found one prison-based program which attempted to perform a true randomized experiment to control for selection bias. This program -- Specialized Training and Employment Project or STEP -- was run by the Wisconsin Department of Corrections and evaluated by the University of Wisconsin Medical School (Van Stelle, 1995). This program randomly assigned a well-defined group of offenders to a six-month program prior to release which included participation incentives, classroom and job training in the institution, and post-release employment assistance. This project showed no decline in recidivism after the first year of the program, but the process evaluation stressed the extraordinary difficulty in implementing a program of this intensity within the prison system.

Another approach which avoided prisons entirely was the pre-trial intervention, a major movement during the 1970's. The concept of pre-trial diversions was attached to the labor market in the Court Employment Project. This was evaluated twice by the Vera Institute, first in the late 1960's (Vera Institute 1970), and then again during 1977-1979 (Baker and Sadd, 1981). In the first less rigorous study, non-serious offenders were offered the opportunity to participate in a 90-day job training and placement program. Successful completion of the program resulted in the dismissal of all charges. Less than half of the participants successfully completed the program. 12 months after the completion of the program, only 15.8% of the successful completers had recidivated, compared to 31% of the non-completers and the control group. Again, the problem of selection bias eliminates the ability to say for sure that the program worked -- the difference between all the program participants (23.6% recidivism rate) and the control group was not statistically significant. Low dosage, problems with implementation and data collection are again cited as part of the reason for the weak results.

By the time the more rigorous study was undertaken almost 8 years later, the program had been assumed into the New York City government and had grown significantly. 410 arrestees were assigned to the program, while 256 controls went through the normal court process. The evaluators found no statistically significant difference between recidivism for the two groups, during the diversion period, twelve months after the diversion or 23 months after the diversion. Partial explanations for the failure of the program include the large disturbance in the program immediately before the evaluation due to New York City's budget crisis. However, the

⁸ These questions are particularly hard to examine because the report provides no data on employment outcomes.

evaluators concluded that there were systematic problems with the structure of the pre-trial diversions. For example, counselors did not believe that it was realistic to change the attitude of offenders towards work in 4 months, especially since participants typically lived in criminogenic environments removed from the world of work. Therefore, the training program was not seen as a route to real employment (and hence non-recidivism) but rather as a route away from jail time. In addition, the evaluators felt that the prosecutors had started using the program to control offenders who would otherwise have their cases dismissed, instead of diverting cases which would not be dismissed away from the courts (Hillsman, 1982).

Another approach concentrates on transitional assistance after an individual leaves prison. Job Training Partnership Act (JTPA) programs have attempted to help ex-prisoners by giving them a) job search assistance, b) remedial education, c) occupational skills, d) work experience, e) on-the-job training, or f) customized training for a particular employer. The one evaluation of these programs (Finn and Willoughby, 1996) looked at all 521 ex-prisoners who enrolled in JTPA training programs in the state of Georgia for one year starting in July 1989. These enrollees were compared to 734 non-offender JTPA participants. The researchers found no sign of any difference in employment outcomes either at program termination or 14 weeks after termination between the ex-prisoners and the non-offenders. This result is hard to interpret. Other studies have shown a consistent difference between ex-offenders and other workers. Perhaps the finding of no difference indicates that JTPA programs have helped eliminate some of the stigma of offending. However, since JTPA programs are generally regarded as only minimally effective at improving employment outcomes, that conclusion is hypothetical at best.

Another large federally-funded program tried in the late 1970's involved the use of income supplements during post-release in order to lessen the need to commit crime for money at a time when it may be particularly difficult to find a job. These randomized experiments known collectively as the Transitional Aid Research Project [TARP] (Berk, Lenihan and Rossi, 1980) showed that no combination of job training and transitional income support could reduce arrest rates. TARP built on a smaller Baltimore LIFE (Living Insurance for Ex-Offenders) experiment, carefully designed and evaluated (Mallar and Thornton, 1978; Rossi, Berk and Lenihan, 1980; Myers, 1982): The LIFE evaluations found that even combinations of job assistance and counseling for one year had no impact on recidivism but that the transitional payments did make a statistically significant difference. Perhaps TARP could not maintain the program integrity of LIFE once the program was expanded.

Despite the failure of TARP, long term follow-up of the Georgia TARP subjects by Needels (1996) demonstrated that the intuition of these programs is still valid - Needels found that the ex-offenders with jobs commit fewer crimes than the ex-offenders without jobs, and those with higher earnings commit fewer crimes than those with lower earnings. Even after 30 years of trying, however, no program -- in-prison training, transitional assistance (both in kind and monetary assistance) or pre-trial diversion -- has consistently shown itself capable (through a rigorous random assignment evaluation) of decreasing recidivism through labor-market orientated programs, inside or outside of prison. These results might exist because offenders are

either too deeply entrenched in crime or the criminal justice system is not an effective delivery system for these types of programs.

Offender-based programs come late in criminal careers, simply because incarceration or even conviction tends to come late. There are strong arguments for intervening early. The next subsection reviews programs that are aimed at high-risk youth before they become involved with the criminal justice system.

Job Training and Education Programs for At-Risk Youth

A large number of relatively well-funded governmental programs have tried to boost the labor market performance of at-risk youths (high school drop-outs, kids from poor households or poor communities). Although we do not have total expenditures for all such job training programs, the largest single program, Job Corps, enrolled 60,000 youth at a total cost of \$970 million in 1993, while Title II-C of the JTPA (Job Training and Partnership Act)⁹ enrolled 360,000 youth at a total cost of \$650 million. These programs have undoubtedly attracted the largest amount of government spending of any single labor market category in this review. Encouragingly, there are also many rigorous evaluations, with most studies using some form of randomized experiment (method score 4 or higher); see Table 6-2. In reviewing the findings of these evaluations, we rely primarily on three reviews of the literature: Donohue and Siegelman (1996), Heckman, (1994) and U.S. Department of Labor (1995).

Programs aimed at youth tend to take three forms, arrayed below in order of increasing expense and program intensity.

*1) The provision of summer work or other forms of subsidized employment in either public or private sector organizations*¹⁰. These programs typically cost about \$1,000 (in terms of 1995 dollars) per participant and lasted about three months. The Summer Youth Employment and Training Program [SYETP] is the Department of Labor's current summer jobs program, providing minimum wage summer jobs and some education to hundreds of thousands of disadvantaged youth, aged 14-21. Less typical is the more intense Supported Work program from the late 1970s, which provided about one year of full-time public sector employment to minority high school drop-outs aged 17-20, with job search assistance at the end of the work period.

⁹ JTPA is the main federal funding source for job training programs in the U.S.. JTPA funds a number of discrete program types including a) job search assistance, b) remedial education, c) occupational training d) work experience e) on-the-job training or f) customized training for a particular employer.

¹⁰ Strictly speaking the provision of a job is not a job training or education program. However many employment skills are learned on the job; employment increases future employability.

TABLE 6-2
Non-Criminal Justice System: At-Risk Youth

Studies	Scientific Method Score (Number of cases Treatment/control)	Description of Intervention and Findings
Summer Jobs/ Subsidized Work		
Ahlstrom & Havighurst 1982, Kansas City Work/Study	3 (~100/~100)	Combines work experience program with a modified academic program. There appeared to a negative effect on arrest, as the experimental group was more likely to be arrested by the age of 16 than was the comparison group (51% versus 36%).
Cave & Quint 1990, Career Beginnings	5 (621/612)	Services of Career Beginnings include summer jobs, workshops and classes, counseling and the use of mentors lasting from junior year of high school through graduation. Experimentals were 9.7% more likely to attend college than controls (stat. signif); they therefore worked less and earned less.
Farkas, et al. 1982, YIEPP	4 (2778/ 1255)	Guaranteed full-time summer jobs and part-time school year jobs to disadvantaged youth who stayed in school. School year employment doubled from 20% to 40%, while summer employment increased from about 35% to 45%; however, YIEPP was unable to attain its goals of increased school enrollment and success despite the school enrollment requirement.
Grossman & Sipe 1992, STEP	5 (1613/1613)	Program lasting 15 months which involves remediation, life skills, summer jobs over two years and school-year support. STEP had little or no impact on youth's educational experience and had not altered employment patterns for either in-school or out-of-school youth.
Maynard 1980, Supported Work	5 (570/682)	Structured transitional employment program which offers limited term employment at relatively low wage rates for up to 12 or 18 months., combined with peer group support and close supervision. Up to 18 months post-program, there was a significantly larger % of treatment group youth employed; there was no significant impact on arrest rate of youths.

Summer Youth Employment and Training Program (SYETP)	N/A	Provides summer jobs for youth. Program appears to greatly increase summer employment rates among disadvantaged youth in sites where jobs are provided; have not investigated whether SYETP creates positive long-term impacts on employment after participants leave their summer jobs.
Short-Term Training Programs		
Bloom 1994, JTPA	5 (total of 4777)	Federal government's major training program for disadvantaged youth which provides on average of 5 months of services including on-the-job training, classroom training, and job search assistance (an average of 420 hrs of service). After 30 months no increase in earnings was found, and there was no decrease in crime rates.
Cave, et al. 1993, JOBSTART	5 (988/953)	Provides instruction in basic academic skills, occupational skills training, training related support services and job placement assistance. JOBSTART led to a significant increase in the rate of GED attainment, or completion of high school. In the final two years of the follow-up, experimentals' earnings appeared to overtake those of controls, but the magnitude of this impact was not significant.
Wolf, et al. 1982, 70001 Ltd.	4 (535/ 440)	Provides job search assistance, educational services and job preparation classes to high school dropouts (an average of 80-90 hrs. Of services are given). On long-term follow-up (24-40 months.), there were no significant earnings impact reported; however, significant positive impact on GED attainment.
Intensive Residential Programs		
Mallar, et al. 1982, Job Corps	4 (4334/ 1457)	Residential program that provides intensive skills training, basic education, support services and job placement for one year. Average over first 4 years after program exit of 15% earnings increase and a reduction in serious (felony) crime (both significant). Also, a large and significant increase in GED attainment and college enrollment.
Wolf, et al. 1987, California Conservation Corps.	3 (943/1083)	Combines work sponsored by various public resource agencies with youth development activities for up to one year. CCC is not an effective way of raising the earnings of all participants when they first enter the labor market; however, it did improve earnings of disadvantaged residential corps members and significantly increased their hours worked, post-program.

2) *Short-term training with job placement for out-of-school youth. These programs typically last about six months and cost \$2,500 to \$5,000 per participant.* For example, the federal government's principal program for disadvantaged youth, JTPA, enrolled 125,000 out-of-school youth aged 16 to 21 for five months, during which they received on-the-job training, classroom training and job search assistance. JOBSTART was a large scale demonstration program, designed as a more intensive version of JTPA, lasting seven months and including more classroom training, at a cost of \$5,000 per participant.

3) *Long-term, intensive residential programs providing vocational and life skills training, general education and job placement after graduation.* The most prominent of these programs is Job Corps, a residential program aimed at extremely disadvantaged populations. In 1993 Job Corps enrolled 62,000 new youth in tailored one-year programs that included classroom training in basic education, vocational skills, and a wide range of supportive services (including health care), at a cost of roughly \$15,000 per student.

Very few evaluations of these programs measure change in criminal behavior, simply because crime prevention is not generally a primary objective and requires substantial and complex additional data collection¹¹. Crime control is a secondary effect which may happen as the consequence of increased employment, the primary objective. The remainder of this section will briefly review the principal evaluations of these programs, starting with the subsidized work programs.

Subsidized work programs are the cheapest and least intensive of any of the training programs aimed at at-risk youth. Although all subsidized work programs show a decided increase in employment for the targeted population over the time period of the subsidy, no evaluation has shown any long term effect on employment. Not surprisingly, the one evaluation that looked at crime (Supported Work) showed no sustained decrease in crime rates (Piliavin and Masters, 1981). Perhaps more damning, the crime rate of participants in the Supported Work program did not decline while they were working in the subsidized jobs. The conclusions seem robust -- subsidized work does not increase productivity in any appreciable way and these types of jobs do not appear to have the necessary characteristics to be supportive of non-criminal behavior.¹²

The picture is only slightly less gloomy for short-term skill training programs. None of the rigorous evaluations in this category have shown any lasting impact on employment outcomes, although some of the programs show a short term gain in earnings. It is again not surprising then that the one evaluation that looked at crime shows no lasting impact (JOBSTART). A slightly more detailed look at the data show that while there are no employment gains, there are some educational gains from these programs. JOBSTART and

¹¹ Self-report from program participants about crime involves inquiring about sensitive behaviors. Official record checks of criminal histories requires obtaining Privacy Act protected information from a different set of agencies than those providing the other outcome data.

¹² This result is supportive of Sampson and Laub (1990) who claim that its not the job but the social bonds of the workplace, bonds that probably are absent in a short-term subsidized work environment.

other programs effectively doubled the fraction of GED recipients. Although GED completion is in fact correlated with higher earnings, it apparently serves as a credentialling device rather than a training device; i.e. the fact of earning a GED indicates an ability to sustain consistent effort but working toward the diploma does not actually develop skills. This helps explain why the earnings gains showed in these programs are not long lasting. Eventually, those without GED's are also able to acquire similar jobs; it just takes them longer without the GED credentials. These programs are generally unable to increase productivity in any meaningful way within the constraints of a short-term non-intensive program.

The one positive result in this literature is from the long-term residential training program, Job Corps. Job Corps is by far the most intensive and expensive non-military training sponsored by the federal government. The high cost is a consequence of the residential element of the program and its severely disadvantaged population (over 80% are high school dropouts). The most recent Job Corps evaluation in 1982 was not as rigorous as most of the other evaluations in this literature because it was not randomized experiment. It had to use a comparison group drawn from people eligible but not likely to participate in Job Corps because of geographic location. Despite these limitations, the study was carefully done and generally regarded as credible, although Donohue and Siegelman (1996) raise serious questions about the magnitude of the decline in the homicide rate for enrollees¹³.

The evaluation found that four years after graduating, enrollees earned on average \$1,300 more per year than the control group, a difference of 15%. Not surprisingly, these achievements corresponded with real increases in educational achievement. Enrollees were 5 times as likely to get a GED or finish high school, and twice as likely to go to college. Also, there was a significant decline in arrests for serious crimes, especially theft. However, there was also an unexplained increase in minor arrests, especially traffic incidents.

The failure of all but the most intensive job training programs for at-risk youth to have an effect on either employment or crime raises some serious questions about this particular approach. There are several possible explanations:

- 1) The first, and simplest explanation is simply that low dosage programs over a six month period (or less) do not have enough statistical power to make a measurable impact.
- 2) More substantively, these lower dosage programs might not simply be enough to counterbalance a failed academic career that often finds 15 and 16 year olds reading at the 5th grade level. A large amount of training must be exerted in order to raise reading levels four, five and six grade levels.

¹³ The reported reduction in homicide rates suggests that the control group had extraordinarily high homicide rates compared to their peers, thus making suspect the claimed reduction in homicides for the experimentals. Homicide reductions accounted for a large share of the dollar benefits estimated in the evaluation. On the other hand the figure used for estimating the value of a life for homicides was much lower than reported elsewhere in the literature; it is possible that the errors roughly cancel out.

3) Perhaps Williams et al. (1996) have a point in that employment by itself is not enough to stop crime. In fact, employment for youth might be criminogenic -- the low paying, low skill jobs normally taken by youth do not add significantly to human capital, but they do take time away from school activities which could increase human capital.

Points two and three, taken together, suggest that the real, long term answer to this problem for the vast majority of at-risk youth lies not with after-the-fact job training but rather with an effort that makes schooling more meaningful to students before they drop out of school. The Department of Labor, in following this logic, suggests that the answer lies in connecting training to real jobs to a school environment through the recently enacted School to Work Opportunities Act. The emphasis on the school-to-work transition is supposed to make students and schools more motivated to learn, and decrease dropouts (Rosenbaum [1996]). This belief is based in part on the success of Job Corps in connecting education to success in the labor market. This philosophy of using the school-to-work transition as the instrument for improving the utility of regular schooling is untested. Given the administration's commitment to the idea, we expect evaluations will be completed within the next two years.

It is valuable to note that there have been evaluations of school-based anti-dropout programs that are not based on the school-to-work model. Evaluations of these programs are neither as numerous nor as rigorous as those for job training programs. The evidence also suggests that anti-dropout programs, because they involve working within the complex environments of schools (see the School Chapter in this volume) are extremely difficult to implement. However, two random assignment evaluations have shown that intensive anti-dropout programs have had substantial success in reducing drop-out rates and showing gains in human capital acquisition.

The strongest positive evaluation is for the Quantum Opportunities Program (QUOP), a demonstration program offering extensive academic assistance, adult mentoring, career and college guidance, a small stipend and money set aside for a college fund. Services totaling 1286 hours over four years (equivalent to about 6 hours per week) were provided to children from AFDC families throughout high school, at a total cost per participant of \$10,600. The rigorous evaluation of 100 students in four sites (random assignment, scientific method score = 5) found that 42% of the QUOP students were in post-secondary education versus only 16% of the controls; a total of 63% of the QUOP students graduated from high schools, versus only 42% of the control group (DOL, 1995). This evaluation has no long-term follow-up of employment outcomes. However, the increase in enrollment in college is likely to be a good predictor of improved labor market performance.

In this evaluation, adult mentors were assessed to be the most important element. Apparently the mentors provide the necessary focus and motivation for students to change their behavior and perform better in school. Yet notice that in QUOP, the key elements of

the school-to-work philosophy -- direct connections to the labor market, and contextual learning -- were not employed. As in Job Corps, QUOP students were in routine contact with adults who projected a positive attitude about meaningful employment.

It is impossible within the context of the current literature to determine if mentoring or a school-to-work program (or some combination) is better able to change the motivation of the at-risk youth. However, it is clear that individuals need to become focused on obtaining meaningful and productive employment before they will/can take advantage of job training or schooling. We will discuss other ways to change the orientation of youth later in this section.

Job Training for Adults in the General Population

A narrow focus on job training for at-risk youth is perhaps justified within the context of a crime prevention program. Adults who have not offended by age 25 are at low risk of offending. If they have offended by age 25, chances are they will be already be involved with the criminal justice system. However, some people will be out of the criminal justice system, yet still need training in order to find meaningful employment. These older adults may have a reduced propensity to commit crime due to maturation. As a result, the number of crimes prevented by such a training program might be lessened, but at the same time, these individuals may be finally ready to take advantage of training programs that are offered. In reviewing the extensive literature on job training for the general population, Heckman concludes the following:

Employment and training programs increase the earnings of female AFDC recipients. Earnings gains are (a) modest, (b) persistent over several years, (c) arise from several different treatments, (d) are sometimes quite cost-effective. . . . For adult males the evidence is consistent with that for adult women. (Heckman, 1994: 112).

Consistent with these findings, older ex-offenders in the Supported Work program appear more responsive to the program than do younger ex-offenders. In addition, older subjects in the Baltimore Life experiment also recidivated less often relative to their controls than did younger subjects. The authors of the Supported Work program conclude "the evidence in this experiment and elsewhere suggests older disadvantaged workers, including those who are known offenders, may be much more responsive (than younger workers) to the opportunity to participate in employment programs (Piliavan and Masters, 1981:45)."

Housing Dispersal and Mobility Programs

Much of the above discussion has been focused on at-risk individuals, rather than places. But depressed urban areas deserve special attention in this chapter given the simultaneous existence of high crime and low employment in these areas. A decade ago, William Julius Wilson (1987) identified the movement of jobs from the inner city to the suburbs as the key factor in the growing concentration of African-American poverty and the social problems related to that hyper-segregation. More recently he has argued that only an

employment oriented policy can reduce the social problems of these communities (Wilson, 1996). Yet, as we will see in the following section, stimulating true economic development in the inner city through tax incentives or direct capital subsidies has proven very difficult. Substantial economic forces¹⁴ have led to the movement of businesses to the suburbs, and these forces are extremely difficult to counteract (Hughes, 1993).

As a result, policy makers have recently begun to develop ways to change the supply of labor by bringing the people in the inner city to the jobs in the suburbs, instead of bringing jobs to the people in the inner city. One way to do this is to physically relocate inner city residents to the suburbs (housing dispersal programs).

The only published outcome evaluation of the housing dispersal concept is based on what is known as the Gautreaux housing mobility program in Chicago. Starting in 1979, the Gautreaux program has given 6,000 inner city families (primarily single mothers) vouchers that allow them to relocate to low poverty neighborhoods throughout a six county area in and around Chicago. The program, started as the result of a federal court ruling in a housing discrimination case, also allowed families to move within the city of Chicago. Families were assigned to the suburbs or the city based on where there were apartment openings when they became eligible for the program. Because the waiting list was long, and because families were placed at the back of the list when they rejected an opening, very few families rejected an apartment when it was offered, regardless of the location.

Rosenbaum (1992) took advantage of this natural experiment to compare the employment and educational outcomes of the city movers with the suburban movers (scientific method score 4). He found that women who moved to the suburbs were 28% more likely to be employed than the women who moved inside the city, on average 5.5 years after moving. This was true even though the wage gains attributed to the move were the same for all women who worked, regardless of their location. In addition, he found that 9 years (on average) after the move, the children of the suburban movers were doing significantly better than the children of the city movers (scientific method score 3¹⁵). Although criminal activity was not measured, the children of the suburban movers dropped out of high school only 25% as often as the city movers, were in college track courses 1.6 times as often as the city movers, were 2.5 times as likely to attend college, were more than 4 times as likely to earn \$6.50 an hour if working, and only 38% as likely to be unemployed. These results suggest that for children in these environments, relocation can be an effective tool to change their focus towards positive outcomes like meaningful employment.

¹⁴ Massey and Denton (1993) argue that the strong desire for racial segregation has also been an impetus for the exit of jobs.

¹⁵ The sample is different for the children and the mothers. The children come from a sample originally composed in 1982. They were reinterviewed in 1989. Only 59% of the original sample could be relocated, and most of those relocated had not moved from the original location. The potential for bias exists because the harder to locate families might vary by suburban or urban location.

These large positive results led to significant optimism on the part of policy makers about the benefits associated with simply relocating poor families to non-poverty areas. Several programs modeled on the Gautreaux programs were spawned and now operate in Cincinnati, Memphis, Dallas, Milwaukee and Hartford. In 1992, HUD provided \$168 million to fund Moving to Opportunity as a demonstration program for the housing mobility concept. Moving to Opportunity has 5 sites in large cities -- Baltimore, Boston, Chicago, New York, and Los Angeles -- and is funded for at least 10 years. The project has been set up with a rigorous evaluation component (scientific method score = 4) -- households are randomly assigned to either placement in a suburban location with less than 10% poverty, placement in the central city, or no treatment. About 1,300 families will be given vouchers which allow them to relocate in low poverty suburbs, along with extensive counseling about relocation and assistance in finding a new apartment. Initial evaluations should be available by mid-year 1997.

Despite Gautreaux's apparent success, and the development of programs like Moving to Opportunity, housing dispersal programs have met significant opposition from suburban residents afraid of the impact of poor minority families on their communities. For example, the expansion of Moving to Opportunity to include more than 1,300 families was defeated after it became a political issue in the 1994 election. The Mount Laurel decision in New Jersey, a two-decade-old, court-enforced dispersal strategy, is now being undermined by legislators. In addition, minorities sometimes voice a concern that the dispersal of minorities to the suburb will weaken minority political power (Hughes, 1993). According to Kale Williams, former director of the Gautreaux program in Chicago, part of the success of Gautreaux was because "it hasn't been large enough to threaten anyone and hasn't been concentrated enough to arouse apprehension." Given these problems, it seems politically unlikely that housing mobility programs will ever expand to any significant size or at least cannot politically afford to move large numbers of poor people in specific non-poor neighborhoods.¹⁶

This reality, however frustrating, suggest that perhaps a strategy aimed at integrating workplaces instead of neighborhoods might be easier to implement. This argument suggests that the best approach to the problem of inner city poverty are mobility programs which provide transportation for inner city residents to the suburbs (Hughes, 1993). Such a program recognizes (and takes advantage of) the power of the suburban labor markets to increase residents' incomes while avoiding the political problems associated with housing dispersal. This idea is relatively new, and as a result only a small number of programs are in operation in the United States.¹⁷

¹⁶ Of course, many of the same objectives met by housing dispersal programs could be met by encouraging gentrification of older depressed neighborhoods.

¹⁷ Within this area, we noted the absence of any discussion of the role of crime in driving business to the suburbs, or the potential crime prevention effects of new job connections in the suburbs.

However, HUD has funded an \$18 million dollar demonstration program in five sites starting in 1996 and running for four years. The strategy has three main components: a metropolitan-wide job placement service to connect inner city residents with suburban jobs, a targeted commute mechanism to provide transportation to the jobs, and a support services mechanism which will try to ameliorate some of the problems that may arise due to a long-distance commute into a primarily white suburban location. Rigorous evaluation with random assignment will be undertaken by Public/Private Ventures. If successful, this program will form a key component of the welfare reform strategy.

The mobility programs are rooted in theoretically very different approaches to reducing central-city crime. Housing dispersal programs attempt to break up the poverty community. Reverse commuting preserves the community but at a cost: the long commuting causes reduced guardianship and parenting that have potentially negative effects in their home communities. Children also do not benefit in the same way because they continue to live in the same depressed environments. These reverse commuting programs might serve to increase employment and decrease the criminal activity of a particular person, but the programs will probably not have the indirect anti-criminogenic effects of housing dispersal programs.

IV. DEMAND-SIDE PROGRAMS

Bonding and Wage Supplements

All the programs described in the previous section focused on changing individual behavior. Yet perhaps employers feel that certain individuals, particularly ex-offenders, represent a potential risk. A criminal history record appears to be a predictor of low job attachment (in part because of the risk of future arrest and incarceration), poor performance, theft and malingering. To overcome these barriers, a number of demand-side programs offer to compensate employers for incurring the risk of hiring workers with a criminal record.

One class of program directly lowers the employer's wage payments, either with a subsidy or through a targeted job tax credit (i.e. the employer of a particular class of worker is able to deduct the payments or some portion of them, from his taxable income. This reduces the amount that an employer has to pay the worker, the difference being picked up by the government. The programs are transitional and are intended to last just long enough to allow the offender to acquire a work history that of itself will increase future prospects. The second class of program is more indirect and takes the form of subsidized bonding of offenders, thus reducing the cost for the employer of insuring himself against specific crimes, such as inventory theft; such bonding is normally provided by private corporations.

The federal government, however, has offered a very low level of funding for these programs. The Department of Labor discontinued in 1995 the Targeted Jobs Tax Credit, for which the annual budget never exceeded \$10 million, with most of that targeted to other disadvantaged groups. Some state Departments of Corrections (e.g., Texas) do offer wage subsidies. However no evaluation identifies the impact of these on either employment or

crime. In addition, some researchers (DOL, 1995) feel that these programs actually hurt ex-offenders by clearly identifying their ex-offender status. While it might be worthwhile to fund an evaluation of the very small Federal Bonding program (\$240,000 total in 1996), the one independent review of the Targeted Jobs Tax Credit was not optimistic that these programs improved employment among ex-prisoners (Jacobs, 1984).

Enterprise Zones

Community development programs use demand-side policies to help particular areas. Although these programs are focused on depressed areas, like housing dispersal programs, community development programs can be used in a wider array of settings. These programs are of particular interest for crime prevention because they propose to help both individuals and neighborhoods. New jobs present more opportunities for legitimate work to compete with illegitimate opportunities often present in these communities. Jobs visibly available in an area would also provide motivation for education and skills training for young people. The economic activity that new or expanded businesses represent can also lead to increased social interactions among residents and strengthen social institutions (churches, business organizations, schools) which can exert a positive influence on individuals who might otherwise revert to crime.

Enterprise zones are one relatively new policy tool focusing tax incentives at generally small, economically depressed geographic areas (Papke, 1993, Erickson and Friedman, 1991). According to Erickson and Friedman (1991) these programs typically employ three different types of program incentives to encourage job development: investment incentives, labor incentives and financial incentives. The investment incentives include credits for property taxes, franchise taxes, sales taxes, investment taxes and other possibly state-idiosyncratic employer taxes (e.g., inventory tax credits). The labor incentives include a tax credit for job creation, for hiring a zone resident or some other disadvantaged person, and for training expenditures. Finally, the finance incentives sometimes include an investment fund associated with the program and preferential treatment for federal bond programs. These programs are based on the assumption that employers are sensitive to state and local tax incentives in their location decisions. The academic literature shows mixed results about the validity of this claim, although recent evidence suggests that investment is more responsive to state and local taxes than previously thought (Bartik, 1991).

As of 1995, 34 states had a total of 3,091 active enterprise zone programs (median = 16) and the Federal Empowerment Zone and Enterprise Community Program has introduced 106 more zones (Wilder and Rubin, 1996). The state zones are limited in the value of the incentives they can offer, precisely because federal taxes (e.g., corporate profits tax) are so large and cannot be waived by the state. According to Erickson and Friedman (1991), the median zone population for the state programs is about 4,500 persons and the median zone size is about 1.8 square miles. Zone designation is usually based on unemployment rates, population decline, poverty rates, median incomes, the number of welfare recipients or the amount of property abandonment. The federal program amounted to \$640 million in total tax credits in FY 1995.

Since these programs are relatively new, (the median state began its program in 1984) there are few outcome evaluations, most of which are reviewed in Wilder and Rubin (1996); no evaluations of the federal program have yet been conducted. All evaluations consider only the immediate economic outcomes of these programs, and do not examine the larger social implications (such as crime reductions) of the programs; see Table 6-3. Only Bartik and Bingham show an awareness that this is a shortcoming of these evaluations. The evaluations also do not attempt to determine the impacts of individual incentives. Although ideally researchers could identify the most effective tax break, the incentives are typically used in concert, so that the economic growth in any given zone cannot be attributed to any one incentive; nor is it possible to separate out component effects using econometric techniques.

The main theoretical concern about enterprise zones is that they will simply relocate existing jobs rather than create new jobs. In fact, Britain, which pioneered these zones, abandoned its enterprise zone program after researchers found that nearly all jobs in enterprise zones (86%) were due to relocation from neighboring communities. The US experience is somewhat more optimistic - the literature seems to agree that, of all the new jobs found in enterprise zones, roughly 25% are due to relocation, 25% are due to new business and 50% are due to expansion of existing businesses (Wilder and Rubin, 1996). Of course, not all the jobs that appear in the enterprise zone should be attributed directly to the zone incentives. However, the primary modes of evaluation in this field, correlation and before-and-after without comparison group (scientific method score 1 and 2), do not allow researchers to isolate the contribution of the zone incentives.

In addition, most of these studies use data from surveys of zone firms or zone managers; these lack credibility as measures since both groups have an incentive to place a positive bias on the outcomes.¹⁸ These studies generally conclude that the zones increase jobs and investment, although results vary by zone.¹⁹

¹⁸ In an attempt to determine what would have happened if the zones had not existed, these surveys ask zone firms and zone managers how many of the jobs were due directly to the incentives. Obviously, it is in the self-interest of both sets of agents to provide positive answers.

¹⁹ The surveys did provide useful insight into the elements of programs which seemed to work best. Bostic (1996) concludes that the incentives provide only marginal incentive for firms to locate in zoning areas. Program success in California depends on supplementing the tax incentives with an active local government or community effort, mainly with marketing. Wilder and Rubin (1996) conclude that places with severe economic blight need additional assistance beyond enterprise zones, and autonomous management of the zone is effective. Finally, Erickson and Friedman (1991) conclude that the most successful state programs restrict the number of zones, use a competitive award process (which pulls together local resources), and provide significant incentives to these limited, targeted areas.

TABLE 6-3
Enterprise Zones

Studies	Scientific Method Score (Number of cases Treatment/control)	Description of Intervention and Findings
Boarnet & Bogart 1995	3 (7/21)	New Jersey EZs have no impact on employment and business growth.
Papke 1992	3 (15/24)	Indiana EZs decrease zone unemployment by 19%.
Bostik 1996	3 (5/27)	California EZs in small cities increase business construction.
CA State Auditor 1988	1 (13)	Survey of firms indicate small net increase in economic activity with wide variability across zones.
Dowall, et al. 1994	2 (13)	Although employment growth and increased business activity increased in all CA zones, researchers concluded that zone incentives could not be linked to growth.
Erickson & Friedman 1991	1 (35)	EZs in 17 states appear to create jobs in areas with development potential. EZs are ineffective in highly distressed areas.
GAO 1988	2 (3)	3 rural Maryland EZs zones showed significant increases in employment and investment after zone designation.
HUD 1986	1 (10)	Interviews with zone managers in 10 zones in 9 states responsible show zones lead to significant new investment and job growth.

Jones 1985	2 (1/1)	Connecticut EZ has no impact on building activity
Jones 1987	2 (1/1)	Illinois EZ has an impact on building activity
Wilder & Rubin 1989	1 (1)	Firm-level survey data show increase in jobs due to Indiana EZ in Evanston.

Only three studies (Papke, 1994; Boarnet and Bogart, 1996; and Bostic, 1996) attain a level 3 scientific method score; they are before-and-after studies of a particular state's enterprise zone program (Indiana, New Jersey and California respectively) with comparison groups from other eligible areas in the state. Each study also uses data collected by independent agencies, so the data is unlikely to be biased by EZ participants. The first two studies used econometric methods to control for selection bias, the latter did not.

The results of the first two studies contrast strongly -- the New Jersey study found that the zones had no impact on total employment or property values in municipalities with zones²⁰, while the Indiana study found that the zones led to a long term 19% decline in unemployment rates in municipalities with enterprise zones. The Indiana researcher was somewhat surprised by the magnitude of this effect, given that the employment incentives were limited in the Indiana zones. But the study also found that firms responded to reductions in inventory taxes by increasing inventory by 8% and reducing capital machinery by 13%. These changes in inventory and machinery may represent the conversion of firms from manufacturing to more emphasis on distribution, generating a positive impact on employment.

Bostic's study used investment growth rather than employment as the principal outcome measure. He found that the EZs had a significant but small impact on commercial construction permits and an insignificant impact on the number of businesses in an area.

Clearly, additional research is needed to verify the positive impact of enterprise zones on employment and investment. Abt Associates have been commissioned to do an evaluation of the Federal Empowerment Zones and Engberg et al. at Carnegie Mellon are undertaking a comprehensive evaluation of state enterprise zones with controls for selection bias.

Community Development Block Grants

The 1974 Community Development Block Grant (CDBG) Program represents the other major federally funded program aimed directly at revitalizing distressed neighborhoods. Instead of relying on tax credits as incentives, this program provides direct funding to local governments. In 1992, CDBGs provided local jurisdictions with \$3.4 billion to be spent on activities that support any one of three objectives: benefiting low- and moderate-income persons, preventing or eliminating slums or blight, or addressing other urgent community needs. The program funding breaks down broadly into 5 main areas: housing (38%), public facilities (22%), economic development (12%), public services (9%) and acquisition and clearance (6%). Although there are no outcome evaluations of this

²⁰ This result is especially interesting given that a before and after study by Rubin (1990) found substantial effects in New Jersey.

program,²¹ the sheer size of the economic development component of this program (\$251 million in 1992) demands inclusion in this section.

Most of what follows is based on a 1995 funding process evaluation sponsored by the Department of Housing and Urban Development (Urban Institute, 1995). The evaluation, like those for Enterprise Zones, considers only economic outcomes. A full 78% of the \$251 million economic development grant money was spent on loans and grants to private businesses. Most of the recipient businesses were small, and 37% of these businesses were minority owned. These loans seemed to perform better than the non-geographically targeted Small Business Administration loans. According to the HUD report, these loans were more important to the business activities of the recipients than the EZ tax incentives,²² but neighborhood residents held a comparable number of the newly created jobs under both programs (approximately 30%).

An effort was made to provide a before-and-after study of 250 census tracts in the CDBG program (scientific method score = 2), using a survey on all CDBG funding and census data from 1980 and 1990. This study found a clear relationship between the level of funding and tract income: tracts that saw an increase in income received \$1,247 per capita, tracts that were stable between the two time periods received \$844 per capita and tracts that declined received \$737 per capita. Improvement in low-income tracts usually only occurred through gentrification or out-migration of low income people, but in several instances the arrival of major industrial facilities resulted in an increase in income for the tract residents.²³

In more general terms, the researchers concluded that the existence of an income-mix among neighborhood residents and a healthy commercial district appeared to help development. Within the context of this review, these factors could signal the existence of a certain level of social control which would allow community programs to be effective. Neighborhoods without these factors may not have enough social capital to take advantage of any community-based program.

V. A PROPOSED INTEGRATION

Existing evaluations of interventions aimed at increasing employment for high risk populations provide little positive guidance as to the appropriate direction of labor market

²¹ The lack of outcome evaluations is attributed to the flexibility of the programs, the lack of credible evidence about what would have occurred in the absence of the program and the inability to conceptualize and measure clear outcomes at a neighborhood level.

²² A full 80% of recipients said that the loan was crucial to their activity, while EZ incentives are typically important for 30 to 40% of all EZ businesses (Wilder and Rubin 1996).

²³ Although these numbers appear to suggest that higher CDGB funding generates improvements, this conclusion is not possible without some other comparison. For example, there may be selection bias, as the result of better organized communities, which are more likely to be improving economically anyway, may do better in the grant application process.

policies for more effective crime prevention. The demand-side programs (Community Development Block Grants and Enterprise Zones) have not been subject to rigorous evaluation. Moreover, they involve such a broad array of incentives and funds that it will be hard to determine what might explain any positive findings and thus what is worth replicating. Evaluations of training and education programs, aimed at labor supply, have shown little positive consistency; there are merely hints as to what constitutes a successful program and there are very few findings specifically on crime reductions. Programs aimed at ex-offenders do a little better but again there is a lack of consistent positive findings that allow one to say that specific interventions work for large segments of the eligible population.

The negative findings concerning job training and employment for high risk groups may primarily be explained by the extremely limited nature of most of the interventions that have been tried. Heckman (1994) makes this point nicely with respect to training programs generally. He suggests a mind experiment. Assign a generous annual real rate of return of 10 percent to social programs, higher than is usually observed for investments in education. Interventions that cost \$2,500 per client and are aimed exclusively at raising the earnings of participants would then be expected to produce annual earnings increases of \$250. This is far too small an amount to lift someone out of poverty (being only about 3% of the required income for an individual) or to improve life prospects enough for most participants that they might make large changes in their decisions about schooling and work.

Not only are small quantities of services provided but the range of risk factors targeted is very narrow. Providing jobs for adults will only weakly compensate for failure to invest in human capital when young. Some theoretically promising interventions have not been tried but merit exploration as a major tool for reducing criminality among young adults. These interventions have to address both the individual dynamics and social ecology of the crime/work choice. The remainder of this section considers the special challenges associated with high crime/low employment areas.

The central argument is simple enough and not original to us. Crime and unemployment are most strongly linked at the community level, at least in urban areas. Persistently very high unemployment rates will generate high crime; that high crime will drive out capital and make jobs increasingly remote. That produces a downward spiral to a low employment/high crime equilibrium which is very stable and highly resistant to small increases in employment or reductions in crime. Interventions have to explicitly deal with crime and employment simultaneously. No evaluated intervention has done so.²⁴

The most important mediating factor in this story may be the motivations of community residents. For example, the isolation of high poverty neighborhoods from the legitimate job market may be critical in accounting for the lack of motivation among youth

²⁴ Operation Weed and Seed, a major OJP program described in Chapter 3, did make an effort to do so. As Chapter 3 discusses, the evaluation was not an integral part of the project, and no results are as of yet available. Difficulty obtaining baseline data after program initiation has made the evaluation particularly difficult.

in these neighborhoods. Rosenbaum (1996), among others, makes this point by observing that youth have difficulty finding employment when they live in impoverished neighborhoods without well-developed job connections. That is exacerbated by geographic isolation from jobs and the possibility of racial discrimination. The perceived returns to continuing in school or in acquiring human capital in other ways is low. This leads to low high school graduation rates and high attrition in training programs, maintaining the under investment in human capital of the previous generation in high poverty neighborhoods.

The claim that improving perceived legitimate employment opportunities will increase school attachment is still not well tested. The available evidence does suggest, however, that school achievement is affected by the achievement of others in the same community. For example, Case and Katz (1991) and Mayor (1991) found that youth are more likely to stay in school or work if a large proportion of their peers do²⁵. The Department of Labor (1995) review of evaluations used this finding as the basis for a claim that poor neighborhoods should be saturated with a range of interventions intended to alleviate poverty, so that "the employment outcomes of some persons within a community can lead to 'spillover effects' as other people in the neighborhood are influenced by the positive actions of their peers." (p.63).

There is some disagreement on the issue of the importance of neighborhood effects. The evaluation of the JTPA program claims that the "external environmental factors – unemployment rates, population density,...had weak effects, if any, on (individual JTPA program) success." (PPV, 1994: 5). However, the same report claims that business involvement with training programs is crucial because "it provides a built-in incentive for participants to feel that their participation is worthwhile." (PPV, 1994, p.14). The tie to business is itself possibly a proxy for community attachment to the labor market.

We believe the community level problem is compounded in two ways by drugs. A large fraction of adult criminal offenders are substance abusers; their involvement with expensive illicit drugs, such as cocaine and heroin, is distinctive. This represents a major employment handicap. Thus workforce oriented interventions will have to deal with the substance abuse problem of potential workers if they are to increase employment and thus reduce crime. Employment is itself possibly a protective factor for substance abuse, increasing the probability of desistance. High risk youth now show more moderate rates of abuse of expensive illicit substances (as reflected in the data from the National Institute of Justice's Drug Use Forecasting program for juveniles) but such risk still needs to be addressed in the context of labor market programs in high risk communities.

Illicit drugs are also a major problem because recent research shows that drug markets in impoverished neighborhoods provide substantial alternative employment to legal markets. For example, Reuter, MacCoun and Murphy (1990) reported that drug selling

²⁵ Analytically, the problem is to disentangle true peer impacts from the tendency of people with similar unobservable characteristics to live near each other.

earned its participants about \$30 per hour in Washington in 1988. Saner, MacCoun and Reuter (1995) found that approximately 30 percent of the 1967 cohort of black males resident in the District of Columbia had been charged with drug selling between the ages of 18 and 24. The existence of attractive alternatives outside the legitimate labor market will complicate any program aimed at attracting individuals to legitimate work opportunity. Also, in contrast to the pre-cocaine-epidemic period, drug selling may now precede drug use; those who sell as juveniles become consumers of their own drugs, making it still more difficult to maintain legitimate employment as adults.

High unemployment neighborhoods generally show high levels of drug selling; this further weakens the ability of individually focused programs to increase employment prospects for men who continually have opportunities to earn substantial amounts in drug selling. In addition, neighborhoods where many males support themselves through some drug selling will not have many of the social institutions that support legitimate work. This will make it more difficult for individuals in these neighborhoods to make the transition to legitimate work.

We have made this long digression about drugs as a reminder again how important it is to take the community as the central focus for programmatic intervention. Individually oriented programs cannot ameliorate many of the fundamental problems faced by program participants. Similarly, programs like reverse commuting, though they may bring important benefits for individuals, will generate few benefits for the most adversely affected communities. Indeed, as already mentioned, the long commutes involved in such programs reduce still further the extent of adult supervision of children that is such an important component of effective community. Programs like Gautreaux which take households out of the community also paradoxically may worsen the situation of those who remain, since the movers are likely to be among the more forward looking adults in these fragile inner city communities. This of course suggests the attractions of the converse, bringing some middle-class households back into the neighborhoods that are so devastated. But crime is as much an obstacle to that as it is to encouraging employers to relocate in the same communities.

VI. SCIENTIFIC CONCLUSION

We have reviewed here a large variety of programs that might reduce crime by increasing employment and labor market outcomes for high risk populations. Our assessments (using the criteria articulated in Chapter 2) of which program types work, which programs do not work, which are promising and for which we can venture no opinion are contained in Table 6-4.

Table 6-4
Program Conclusions

What works?
1) Short-term vocational training programs for older male ex-offenders no longer involved in the criminal justice system.
What does not work?
1) Summer job or subsidized work programs for at-risk youth. 2) Short-term, non-residential training programs for at-risk youth. 3) Pre-trial diversions for adult offenders which make employment training a condition of case dismissal.
What is promising?
1) Intensive, residential training programs for at-risk youth (Job Corps). 2) Prison-based vocational education programs for adults 3) Housing dispersion programs 4) Enterprise Zones
What do not we not know enough about?
1) CJS-based programs for juvenile offenders 2) Post-release transitional assistance for offenders. 3) Reverse commuting 4) Wage subsidies 5) Bonding programs 6) Community development as done through the Community Development Block Grant Program. 7) School-to-Work programs funded by the School-to-Work Opportunities Act.

Programs that Work

The one program type for which the evidence of effectiveness is fairly strong is vocational programs aimed at older males ex-offenders who are no longer in the criminal justice system. We gave little attention to this in the body of the chapter because these programs, though useful, come late in criminal careers. Reducing crime by 35 year olds who have previously been criminally active, will have a modest effect on serious violent crime, which is predominantly committed by younger males. The explanation for the success of these programs may be found in theories of life course events. Age generally increases the desire for stability, lowers the desire for risk and raises concern about the future. JTPA job training, (even for periods as short as 90 days) may have an impact because many of those who enroll are now motivated to seek employment.

What Does Not Work

In contrast, there have been numerous, well-conducted evaluations of well-executed, short-term (many of them summer only) programs aimed at at-risk youth, typically 15-21 year-olds. These have repeatedly found no effect on earnings and crime rates. The high attrition rates we take to be symptomatic of the lack of motivation for many participants, reflecting their perception of weak employment opportunities in early adult life. Without any evidence of impact on other risk or protective factors, we believe that these programs cannot be justified on crime prevention grounds. The two serious evaluations of pre-trial diversion programs suggest that pre-trial diversion programs do not work, at least in part because of the programs tend to get co-opted by the prosecutors for purposes other than the intended purpose of rehabilitating offenders.

Promising Programs

The one class of program aimed at high risk youth for which positive results have been shown is Job Corps, which is both residential and, in terms of expenditures, very intensive (\$15,000 per youth). However there is only one rigorous evaluation (moreover one that has some methodological weaknesses), although another major Job Corps evaluation is in process. Thus we can only classify this type of program as promising. The reasons for its possible success are multiple: it re-socializes the youth by breaking community ties and presenting pro-social role models; its residential requirement reduces the intensity of contacts with anti-social groups and illegal earnings opportunities; its vocational focus and attachment to the labor market provides academic training in a supportive environment.

Prison-based vocational education programs aimed at adults, who constitute the vast majority of the correctional population, are also promising. This again may be explained by the life course model. The current evidence suggests that something works, but no random control trial has found an impact, and few studies have been able to pinpoint exactly what works. Program implementation within a correctional facility and inmate motivation remain major problems. We suggest that the problem of motivation be dealt with by randomly selecting individuals for participation from within a pre-selected pool of motivated individuals.

The last promising programs on the supply side of the labor market are programs that provide dispersed housing for poverty-level households. The Gautreaux program has been found to have had a positive impact on both mothers and children. The program has been operating for many years and fairly large numbers of households (over 6,000 families) have made use of it. Its apparent success in terms of improving educational and employment outcomes for both mothers and children is sufficiently strong that crime reductions can reasonably be inferred. We classify it only as promising because, apart from our formal requirement that there be more than one rigorous evaluation before it be classified as working, the one existing evaluation has many weaknesses. Results from the multi-site, federally-funded Moving to Opportunity program are scheduled to be available in 1997; this should shed more light on the efficacy of this type of program.

On the demand side, enterprise zones have a mixed record according to the few moderately rigorous evaluations that have been conducted. We classify the program as promising on the grounds that if designed with crime prevention objectives in mind (i.e., as part of a more comprehensive effort) it may include a critical ingredient of what is necessary for making high risk communities safer. The federal government is currently funding a large enterprise zone program - it will be interesting to see if the program evaluators consider both the problems caused by crime in these areas, or look at the crime reduction effects of some of these programs. Current evidence suggests that areas with high crime are less likely to succeed.

Programs About Which Too Little is Known

Table 6-4 contains a list of seven program types about which too little is known for any judgment beyond the broadest sense of theoretical plausibility. We include some programs that have frequently been evaluated and have produced mixed results.

The programs that have not been subject to any rigorous evaluation are: bonding programs, Community Development Block Grants, reverse commuting, school-to-work programs and targeted wage subsidies. Though theoretical arguments can be made for each of them, those arguments seem strongest for CDBGs (see Section V), and school-to-work. School-to-work's focus on avoiding dropout and developing human capital over the long run is an interesting response to the motivation and dosage problems we identified in Section III.

For the remaining three types of programs, a number of conflicting results have been produced. Criminal justice-based programs for improving the employment prospects of juveniles seems to have shaky theoretical premises. Employment concerns are not strong for those under 17 and there is a small but growing literature suggesting that early work gives youth too much autonomy at too early an age by lessening their dependence on family. In addition, time spent working is time spent away from conventional schooling which might lead to more meaningful employment (see Cullen, 1996).

The mixed results from evaluations of transitional assistance for inmates leaving the criminal justice system is harder to explain. Internal doubts about their ability to succeed in

conventional society and the external forces that limit them initially to fairly poor jobs combine to create a very difficult transition, especially for offenders without family or friend networks. Transitional aid then seems particularly appropriate. Yet the results from TARP and Baltimore LIFE seem to suggest that motivation (or focus), rather than money is the important issue. Some programs like Project Rio in Texas appear to have success reintegrating offenders using caseworkers, but the program has not been rigorously evaluated.

Bonding and wage subsidies are intended to help with the transition from the criminal justice system to legitimate employment. These components have not been heavily evaluated. There is some concern that wage subsidies and bonding tend to work against offenders by clearly identifying their status to employers.

Program Recommendations

Our program recommendations for OJP are modest, principally because Congress has not directed the department to become involved in funding labor-market-oriented programs outside of the criminal justice system and because such programs clearly have much broader objectives than simply crime prevention. Given the evidence summarized above, we believe that Congress should encourage OJP to continue modest funding of programs that aim at improving the employment prospects of older ex-offenders. The programs do not need to be intensive to be effective and these programs are generally working on the back end of the criminal career. The concept behind Operation Weed and Seed also has some merit - we defer to Chapter 3 for recommendations on this program. The negative findings concerning the effects of short-term subsidized work and non-residential training programs speak not to OJP programs but rather to efforts funded principally by the Department of Labor.

VII. IMPROVING EFFECTIVENESS THROUGH EVALUATION

We have more recommendations concerning research and evaluation. Congress should encourage OJP to take advantage of on-going offender transition programs in state and federal systems to implement rigorous program evaluations of some of the more promising programs. We also recommend that research efforts be focused on the problem of implementing vocational programs within the prison system. Since it appears from some level 3 studies that vocational programs do have some effect, randomized experiments which control for selection bias while also isolating the effective characteristic of the program are clearly appropriate.

The remaining recommendations focus on opportunities for Congress to encourage OJP collaboration with other federal agencies in examining whether interventions with other social aims also have crime prevention impacts. Other agencies will benefit in two general ways. First, crime reduction should be an important element of cost/benefit estimates.

Second, crime prevention considerations may aid program design. We illustrate these by considering three important program classes: welfare reform, school-to-work transitions, and enterprise zones.

Welfare Reform

Perhaps no policy innovation in recent times has attracted such intense analytic interest as the effort to fundamentally alter the long-standing basic federal welfare program, Aid to Families with Dependent Children (AFDC), now converted to Transitional Aid for Needy Families (TANF) and made principally a state responsibility. The center piece of welfare reform is an effort to move women at risk of becoming long-term welfare recipients into employment. This has potentially enormous consequences for their children. If it is successful, a large number of young males will grow up in households that have regular contact with the workplace rather than with welfare checks. On the other hand, if welfare reform fails and large numbers of single mothers become even poorer and more reliant on illegal earnings, this may well have criminogenic effects on their children.

On a number of theoretical grounds, this may have an important impact on youth attitudes toward work and hence the prospect of becoming serious violent offenders. Successful welfare reform could turn out to be the most important social program for crime prevention in recent decades, though the effects will surely not show up for quite some time.

To our knowledge, little attention is being given to the crime prevention consequences of this change. It is important the Congress direct OJP to take advantage of the many large scale research and evaluation efforts that are now being put in place, both by the federal government and by major foundations (e.g., the Annie E. Casey Foundation, which is funding a 5 year \$30 million program at the Urban Institute) to ensure that they assess the extent to which, and the mechanisms by which, welfare reform affects the criminal behavior of the children of women at risk of long-term welfare dependence. Though, as always, crime measures increase the complexity of the measurement task, it is likely that crime will play an important role in the final evaluation of the reform's success.

School-to-Work Transitions

There is growing interest in improving the flow of non-college bound high school graduates into the work force. This has been an area of program innovation again in which Congress has not encouraged OJP to play a significant role. Ensuring that evaluations include crime measures will increase the comprehensiveness of the evaluations and may provide OJP with a major program opportunity.

Enterprise Zones and Community Development Block Grants

A major attribute, arguably the principal attribute, of inner-city communities that makes them unattractive to employers is the high crime rates. Already, OJP is part of a working group cooperating with the consortium of federal agencies that operate the federal EZ and CDBG programs. We believe this cooperation is important to the success of any such comprehensive programs, in part because reductions in crime may be able to explain

variations in employment outcomes. Understanding the role that crime control plays in attracting investment is another crucial, but understudied part of community development programs.

One new multi-agency initiative might be an effort to assess whether a large scale job creation program, backed by other crime prevention measures, can make a substantial and lasting difference in high-crime communities. William Julius Wilson concluded that the lack of jobs was the principal source of the decline of the neighborhoods that now account for such a large share of American crime and outlined an ambitious program of interventions to respond to this problem. As even he admits, it is unclear that such a program can be implemented but there is certainly good theoretical argument for trying.

However, this proposition does force us to confront a central paradox of prevention evaluation. Learning occurs through examination of variations in one or a few components but successful interventions aimed at improving labor market outcomes for high risk individuals and communities are likely to involve the simultaneous implementation of a large number of programs. But in a situation where individual interventions seem to have limited promise, testing whether a generous cocktail of programs can succeed may be an important first step.

This insight lays the groundwork for what we believe must be the theoretical bedrock of any successful program aimed at increasing labor market participation in order to decrease crime: **A program must connect a community or individuals to the world of legitimate work so that residents will have the proper incentives to acquire the necessary human capital needed for success in that world.** Without that connection, any work program is unlikely to succeed in a substantial way.

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