

An Introduction to Evidence-Based Practices

EXECUTIVE SUMMARY

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The movement toward the use of evidence-based practices (EBPs) has been sweeping the criminal justice community in recent years. The purpose of this briefing paper is to provide policymakers with an introduction and overview of the key concepts and issues associated with the identification and use of EBPs in criminal justice. The briefing provides a brief history of the evidence-based movement, discusses what is meant by evidence and where evidence comes from, identifies sources for information on EBPs, discusses issues associated with implementing EBPs, and addresses the question of what to do when there is no evidence for a particular program or practice.

A Brief History of the Evidence-Based “Movement”

Today’s evidence-based movement has its origins in the field of medicine, beginning in the mid-1800s. The Federal Food, Drug, and Cosmetic Act required that the safety and efficacy of new drugs be demonstrated by scientific investigation before marketing was allowed. As recently as 1976, a report to Congress concluded that “only 10 to 20% of all procedures used in present medical practice have been proven by clinical trial; many of these procedures may not be efficacious.” Shortly thereafter, the medical community began assembling evidence on effective interventions drawn from rigorous studies and disseminating it in a way that practitioners could easily access and apply.

In criminal justice, the mid-1970s saw the publication by Robert Martinson of his now infamous synthesis of research in corrections (Martinson, 1974), followed by a book by Lipton, Martinson, and Wilks (1975), both of which seemed to lead to the conclusion that “nothing works” in rehabilitating offenders. In the 1980s, numerous reviews were conducted to rebut Martinson, along with research into the effectiveness of alternative ways of preventing Crime. In the mid-1990s, two different efforts attempted to identify specific programs that were effective and to objectively assess the methodological quality of each of the studies supporting conclusions about “what works.” In 1996, the Center for the Study and Prevention of Violence (CSPV) at the Institute of Behavioral Science, University of Colorado Boulder developed the Blueprints for Violence Prevention, which initially identified 10 model programs for delinquency prevention and intervention that meet a strict scientific standard of program effectiveness.

In 1996, Congress mandated a "comprehensive evaluation of the effectiveness" of Department of Justice grants to assist state and local law enforcement and communities in preventing crime. The result was a highly visible effort to identify EBPs in criminal justice by

reviewing research and evaluation studies carried out by Dr. Lawrence Sherman and his colleagues at the University of Maryland. The Maryland study was one of the first criminal justice efforts to “score” the evaluation studies it reviewed based on the strength of the scientific methods used.

Where Does Evidence Come From?

The Office of Justice Programs (OJP) “considers programs and practices to be evidence-based when their effectiveness has been demonstrated by causal evidence, generally obtained through high quality outcome evaluations,” and notes that “causal evidence depends on the use of scientific methods to rule out, to the extent possible, alternative explanations for the documented change.” In criminal justice, the term “effectiveness” usually means reducing crime (in the case of policing interventions), reducing recidivism (correctional interventions), or reducing victimization/revictimization (prevention/victim-based interventions).

The term “scientific evidence” is used to describe evidence that is: **objective** (observable by others, based on facts rather than thoughts or opinions, and free of bias or prejudice that might be caused by personal feelings); **replicable** (can be observed by others using the same methods that were used to produce the original evidence); and **generalizable** (can be applied to individuals and groups other than those who were involved in producing the original evidence).

The hallmark of the scientific method is experimentation. This means comparing two groups: those who receive the intervention (treatment group) and those who do not (control group). The outcomes or measures of effectiveness of interest (for example, recidivism) are compared for the two groups to determine if they are in the hypothesized (expected) direction. The best way to ensure the equivalency of the two groups is through random assignment; that is, individuals are assigned to the groups by the researcher/evaluator in a random manner such that each person has an equal chance of ending up in the experimental or control group. These designs, known as randomized controlled trials (RCTs), provide confidence that observed differences are due to the intervention, and reduce the likelihood that evaluators will falsely conclude that the intervention being studied is effective.

Randomized controlled trials (RCTs), are often referred to as the “gold standard” for producing evidence. However, there are a number of questions in criminal justice that cannot be easily addressed using RCTs. In cases where RCTs are not feasible, other methods of designing evaluations may be employed that provide some assurance that observed differences are due to

the intervention under study and not other factors. These designs, known as quasi-experimental designs, vary in terms of their level of sophistication and their ability to control for other possible differences between the groups that might explain outcomes. Evidence produced by quasi-experimental designs is not considered as strong or as compelling as evidence from RCTs.

Some evaluations may not manage to use quasi-experimental designs, but may rely on simple measurement of outcomes. Using this type of non-experimental design does not allow observed outcomes to be attributed to the intervention itself. Thus little weight would be given to any evidence of effectiveness produced by this type of assessment.

There are many types of information that might be collected in an evaluation that would not rise to the level of “scientific evidence.” In particular, opinions, testimonials, and anecdotes are not evidence of effectiveness in and of themselves.

Different sources of information on EBPs handle the question of how the quality and quantity of evidence should be balanced differently. However, in recent years researchers and evaluators have focused less on single evaluations and more on examining the magnitude and consistency of the evidence produced by multiple studies of specific programs and initiatives. This can be done by a systematic review conducted by subject matter experts, or by using meta-analysis, a statistical method for combining the results of multiple evaluation studies.

Resources for Identifying EBPs

In criminal justice, the premier resource for identifying EBPs is CrimeSolutions.gov (www.crimesolutions.gov). Established by OJP in 2011, CrimeSolutions.gov provides information on 270 programs in a number of areas of criminal justice including corrections, courts, crime and crime prevention, drugs and substance abuse, juveniles, law enforcement, technology and forensics, and victims and victimization. Programs are rated as “effective,” “promising,” or “no evidence.”

The Office of Juvenile Justice and Delinquency Prevention (OJJDP) established the Model Programs Guide (MPG) in 2000. The MPG contains over 200 juvenile justice programs rated as either “exemplary,” “effective,” or “promising.” Ratings were established by a peer review panel, and are now based on the same rating instrument used by CrimeSolutions.gov.

The What Works in Reentry Clearinghouse (<http://whatworks.csgjusticecenter.org>) is a BJA-funded initiative established by the Council of State Governments in 2012 and designed to provide information on evidence-based reentry interventions. The site contains information about

56 initiatives in six focus areas (brand name programs, employment, family-based programs, housing, mental health, and substance abuse). Interventions are rated on a five-point scale: strong or modest evidence of a beneficial effect; no statistically significant findings; and strong or modest evidence of a harmful effect.

Outside of the criminal justice arena, an important resource for EBPs is the Substance Abuse and Mental Health Services Administration's (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP). NREPP (<http://nrepp.samhsa.gov>) includes almost 300 interventions in the areas of mental health and substance abuse treatment, substance abuse prevention, and mental health promotion. Independent reviewers assess studies in each area on the quality of research and on readiness for dissemination.

Even from this brief summary of available resources, we can see that different organizations and agencies take different approaches to identifying EBPs. The Blueprints for Healthy Youth Development website provides a list of 500 youth programs rated on at least one of six federal or private organization EBP websites, including CrimeSolutions.gov and the OJJDP MPG (see www.blueprintsprograms.com/resources.php).

Implementing EBPs

One of the keys to being able to take advantages of resources that provide lists of EBPs is being able to successfully implement the programs or practices. This is known as “implementing with fidelity.” Unfortunately, it is often difficult to obtain details about the programs assessed on these various websites.

It is often the case that a program cannot be adopted for use directly, but must be *adapted* to fit a particular set of circumstances before it can be used. Most websites offer caution in adapting EBP programs, advising that key program components should be implemented with fidelity. However, as noted previously, it can be difficult or impossible to identify which program elements must be implemented exactly and which can be changed (and how) without affecting positive outcomes.

In recent years, knowledge about how best to implement programs and practices has been increasing rapidly. One of the leading organizations in this “implementation science” movement has been the National Implementation Research Network (NIRN). The NIRN website (<http://nirn.fpg.unc.edu/>) provides a wealth of information on implementation.

What if there is No Evidence?

While many readers of this briefing may be able to identify a program that suits their needs from one of the EBP resources listed above, others may be interested in implementing a program which has not yet been subjected to rigorous evaluation, or concerned about whether there will be room for innovation when an evidence-based approach is adopted. What should be done when there is no evidence of program effectiveness?

The basic answer to this question is that programs and policies should be based, to the extent possible, on theories and concepts that are supported by research; that is, that are themselves evidence-based. If programs are consistent with established theories of behavioral change, for example, and are implemented using (to the extent possible) core components of evidence-based programs (e.g., that high risk offenders receive more services than low risk offenders), we would expect them to be successful. On the other hand, programs or interventions that are based on questionable assumptions about behavior change that do not employ best practices would not be expected to show positive effects.

For many years, evaluators have been preaching the importance of specifying program goals and objectives, tying these explicitly to program activities, and measuring both the implementation of the activities and the corresponding outcomes. These are known as program “logic models” because they spell out the logic that connects what the program is doing to the outcomes it expects to produce. A solid program, even one that is not directly supported by scientific evidence, should be able to make a compelling case for how what it is doing is expected to result in positive changes (lower recidivism, fewer probation violations, etc.).

Summary

For the last 40 years or so, the criminal justice field has been moving slowly but inexorably toward the use of scientific evidence to develop programs and interventions designed to prevent and reduce crime and victimization. There are now many resources that can provide funders and program managers with detailed information on evidence-based practices in almost all areas of criminal justice. Many questions and challenges remain regarding the implementation of these EBPs, and researchers and scholars are now turning their attention to these issues. It is clear, however, that we have reached a point in time where policymakers are demanding that programs and initiatives be supported by solid empirical evidence. With diminishing resources

available for funding criminal justice issues, understanding how to identify and implement EBPs will be critical for decisionmakers in all areas of the justice system.