

## **Evidence-based Practice: Evaluating Supporting Evidence**

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### **The Need for Evidence:**

Organizations, agencies, and schools continue to move aggressively toward increased accountability in prevention and intervention programs designed for high-risk children and youth. Demands for accountability are emerging from a sense of urgency to develop effective and efficient programs that meet the needs of high-risk children and families. Pressure to document impact, effectiveness, and efficiency generate considerable concern over “what works?” with these children and youth. Most schools and human service agencies attempting to meet the needs of high-risk youth can articulate the need to implement some form of “best practice,” “promising practice”, or “evidence-based practice”. The more challenging task is to determine what kind of evidence is necessary to determine whether an approach should be adopted. How much proof does it take?

### **Sources of Evidence:**

Unfortunately, there is no one simple and easy way to gather evidence. Lists of evidence based approaches are available and are a good place to start, but do not always include programs or approaches that are being considered. The following lists are credible and available on the internet. When using these, or any other list, make certain that the criteria for inclusion are clearly articulated and understandable.

#### *Rating Websites for Evidence-Based Practices*

Youth Violence: A Report of the Surgeon General

<http://www.surgeongeneral.gov/library/youthviolence/report.html>

Washington State Institute of Public Policy

<http://www.wsipp.wa.gov/>

NIDA

<http://165.112.78.61/Prevention/Prevopen.html>

Blueprints

<http://www.colorado.edu/cspv/blueprints/Default.htm>

CSAP

<http://www.samhsa.gov/centers/csap/modelprograms/>

What Works – Report to Congress

<http://www.ncjrs.org/works/>

Positive Youth Development Report

<http://aspe.os.dhhs.gov/hsp/PositiveYouthDev99/>

When programs are being considered that are not included on any inventory of evidence-based approaches, the task becomes more tedious. However, reputable approaches that claim to be evidence-based, should be able to provide published data on effectiveness. This data, preferably combined with effectiveness results published in academic journals is essential in order to accurately evaluate the evidence-base for any particular approach.

### Evaluating the Evidence:

When potential intervention and prevention programs are identified, gather as much information about the approach as possible. Ask the developer/distributor of the program to provide all available validation of the program's effectiveness. Make it clear that the decision to use the approach is contingent upon a review of this information. If the program comes to your attention through a review of the research literature, make sure that you have access to the original article describing the program and its effectiveness. Using the information that you collect, evaluate the program based upon the following evidence. Score one point for each of categories listed below when you have reasonable evidence to suggest that the criteria have been met. Add the total points together to yield a score for the strength of the evidence behind the programs

The total score will fall between 1 and 10. Use the following breakdown of scores to characterize the program you are evaluating:

0-3 points = **Untested Approach** – Such an approach has either 1) no documentation that it has ever been used (regardless of the principles it is based upon), or 2) has been implemented successfully with no evaluation.

4-5 points = **Promising Approach** – Programs with this score have been implemented and significant impact evaluations have been conducted. While the data supporting the programs is promising, its scientific rigor is insufficient to suggest causality. Multiple, undefined factors may be contributing to the success of participants.

6-10 points = **Evidence-Based Approaches** – Programs scoring in this range have compelling evidence of effectiveness. Those with the highest scores (8-10) can attribute participant success to the program itself, and have evidence that the approach will work for others in different environments.

Allow 1 point for the program meeting each of the following criteria:

- ❑ **Implementable.** There is evidence that someone has actually used the program with sufficient participation and no obvious problems in implementation. The program was delivered and there were a significant number of participants in the program. Evidence of completion rates for those recruited into the program is helpful in substantiating whether or not the program is useful.
  - *Evidence comes from project reports and promotional materials.*

- ❑ **Based on Effective Principles.** While there may not be direct evidence that the program has been evaluated for its own effectiveness, the program is built upon clearly established principles of effectiveness that have been validated by other sources. Such principles and the evidence that they are effective should be clearly articulated.

  - *Evidence comes from project reports and promotional materials, as well as a check of the original source of the effective principles being followed.*
  
- ❑ **Customer Satisfaction.** There is evidence that those who participated expressed an enjoyment for the program and an appreciation for its benefits. A review of post-participation information suggests that the participants were engaged in the process and perceived it to be useful.

  - *Evidence comes from participant surveys, anecdotes, or staff impressions.*
  
- ❑ **Change Reports.** There is evidence that something changed during the implementation of the program. Such changes are documented through pre-post tests. Change in knowledge, attitude, or behavior in the desired direction indicate that the program has a certain degree of effectiveness.

  - *Evidence comes from internal documents and evaluation.*
  
- ❑ **Comparison Group.** There is evidence that change in one group is greater than a comparison group. Typically, one group receives the program and another group serves as a control group. In this category the comparison group does not necessarily have to have the same characteristics as the group receiving the program, nor do the two groups have to be assessed on the same timeframe.

  - *Evidence comes from a published document shared with external audiences.*
  
- ❑ **Random Assignment to Control Group.** Participants are randomly assigned to either an experimental or a control condition to establish causality. Change in the intervention group is statistically more positive than any change in the control subjects. There are no major problems in attrition. That is, subjects who began the study generally stayed in the study. Such studies need to have a sufficient sample size to justify the validity of random assignment.

  - *Evidence typically comes from peer-reviewed articles in academic journals.*
  
- ❑ **Longitudinal Impact.** Participants experience lasting changes in behavior as measured over multiple points in time. Typically, changes in pre-post behavior are maintained in follow-up analysis. There is evidence that subjects are tracked for a reasonable length of time following program completion, and that results indicate that positive changes in behavior are maintained.

  - *Evidence typically comes from peer-reviewed articles in academic journals.*

- ❑ **Multiple Site Replication.** Randomly controlled studies of effectiveness have been replicated in at least one independent study using a completely different sample. The more diverse the samples, the more generalizable the results.
  - *Evidence typically comes from peer-reviewed articles in academic journals.*
  
- ❑ **Dosage Analysis.** Studies have been conducted in which levels of treatment varied. Those subjects who received the most intensive interventions benefited more from the intervention than those who received less intensive interventions. These studies should provide evidence of “how much” of a given approach is necessary to achieve the desired results.
  - *Evidence typically comes from peer-reviewed articles in academic journals.*
  
- ❑ **Meta-analysis, Expert review, Consensus.** Sufficient data exists from individual studies to warrant a review of the impact of the particular approach. An organized review of the literature confirms the effectiveness of the approach. Such confirmation could come from a statistical analysis of the effect sizes derived from multiple studies (meta-analysis), the written opinion of experts reviewing individual studies, or the consensus of a panel of reviewers.
  - *Evidence typically comes from peer-reviewed articles in academic journals.*