The Value of Evidence-based Programs

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SFP 10-14 Networking Meeting
June 13, 2012
Evidence-Based Programs

Defining and understanding them...
A brief history of prevention...

• 20 years ago, there were NO empirically-validated prevention programs

• Hundreds of millions of dollars spent with no accountability

• Two decades of rigorous scientific research have informed our knowledge of epidemiology, etiology, methodology, and prevention

• Today, nearly 50 programs have been proven effective in well-designed studies and have been independently replicated
Understanding The “Lists”

Some program lists have stringent criteria that assesses the quality of the research. For example....

Center for the Study and Prevention of Violence's (CSPV) Blueprints: http://www.colorado.edu/cspv/blueprints/

Others provide valuable information, but do not require a level of effectiveness to list programs. For example...

Definition of Evidence-Based

• Effectiveness demonstrated by rigorous scientific evaluation
  - preferably multiple independently replicated randomized or time series control trials
  - increases confidence that the outcomes are the result of the program and that it will not produce any iatrogenic effects

• Effectiveness demonstrated in large studies or multiple replications (generalizability)

• Significant and sustained effects
What Is A RCT?

• “Randomized control trial”

• Random assignment (aka by chance) to group:
  1) an intervention group, or
  2) to a control group

• Assesses whether the intervention causes the observed outcomes, as opposed to other factors
Programs can be placed along a **continuum of confidence** based on their evidence or theory

* *Bumbarger & Rhoades, 2012*

**HARMFUL**

- **Ineffective**
  
  “This program has been evaluated and shown to have no positive or negative effect”

- **Iatrogenic (Harmful)**
  
  “This program has been rigorously evaluated and shown to be harmful”

**EFFECTIVE**

- **Best Practices**
  
  “We’ve done it and we like it”

- **Research-based**
  
  “This program is based on sound theory informed by research”

- **Promising Approaches**
  
  “We really think this will work... but we need time to prove it”

- **Evidence-based**
  
  “This program has been rigorously evaluated and shown to work”

**Very Confident**

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How confident are we that this program or practice is a good use of resources AND improves outcomes for children and families?
Research on SFP

A review of the program history and outcomes to date
The Development of SFP 10-14

Original Version:
- Designed for use with substance-using caregivers and their youth ages 6-12
- Evaluated mostly with high-risk ethnic families

Revision #1:
- Adapted for universal use with youth ages 10-14
- Evaluated with white, rural families
- Named the Iowa Strengthening Families Program (ISFP)

Revision #2:
- Adapted for use with ethnically diverse families
- Renamed SFP 10-14

SFP
Karol Kumpfer, University of Utah
1986

Iowa SFP (ISFP)
Virginia Molgaard & Others, Iowa State University Extension
1993

The Strengthening Families Program: For Parents and Youth 10-14 (SFP 10-14)
Iowa State University Extension
1997
SFP 10-14 Theory of Change

**Program Components & Goals**
SFP 10-14 is delivered over 7 weeks. Each week, the youth and parents meet separately and then together. Targeted goals drive the parent, youth, and family sessions.

**Program Modalities**
Specific strategies, methods, and techniques are used to accomplish the program goals.

**Targeted Risk and Protective Factors**
Risk factors, which increase the likelihood of negative outcomes: school dropout, teen pregnancy, and violent behavior, are targeted for a decrease. Protective factors, which exert a positive influence and buffer against negative outcomes, are targeted for an increase.

**Proximal Outcomes**
Targeted outcomes that the program is designed to impact include: program completion.

**Distal Outcomes**
Outcomes impacted by the program months/years following program completion that have been demonstrated through research.

**Component: Parent Sessions**
**Goals:** Enhance parenting skills and promote effective parenting styles.

**Component: Youth Sessions**
**Goals:** Build youth life skills.

**Component: Family Sessions**
**Goals:** Strengthen family bonds, promote positive communication, and enhance joint problem solving.

**Risk Factors:**
- Negative youth and family management practices: harsh, inappropriate, or inconsistent discipline, indulgence, poor monitoring, demanding/rejecting behavior, and poor communication of rules.
- Youth aggressive or withdrawn behavior.
- Favorable attitudes toward problem behaviors and substance use.
- Negative peer influences.
- Poor social/stress management skills.
- Family conflict.
- Early initiation and persistent antisocial behavior.
- Poor school performance.

**Protective Factors:**
- Positive youth and family management practices: monitoring, age-appropriate parental expectations, and consistent discipline.
- Effective and empathetic parent-child communication.
- Promotion of healthy beliefs and clear standards.
- Family bonding and supportive family involvement.
- Goals/positive future orientation.
- Positive parent-child affect
- Emotion management.
- Pro-social family values.
- Peer pressure refusal skills.

**Improved Youth Skills/Attitudes:**
- Healthy coping & stress management
- Peer pressure resistance
- Making good decisions/Setting goals for the future
- Empathy & appreciation of parents
- Understanding the value of rules & responsibilities
- Know qualities of good friends
- Understand the harmful impact of problem behavior & substance use.

**Improved Parent Skills/Styles:**
- Empathy with youth stressors
- Support youth goals & dreams
- Active listening and effective communication
- Understand youth development
- Clear communication of rules and substance use expectations
- Identify and deliver appropriate consequences calmly
- Reward good behavior
- Monitor youth

**Reduced Youth Antisocial Behavior:**
- Less self-reported aggressive & destructive behavior
- More likely to delay onset of problematic behaviors
- Less likely to show growth in internalizing symptoms

**Improved Youth Academics:**
- More likely to report improved school engagement
- More likely to report improved academic success
Major SFP Research Trials

• Study 1: SFP Longitudinal Evaluation (1993-2007)

• Study 2: Replication with African American Families (1996-1997)

• Study 3: SFP vs. Life Skills Training vs. Both (1997-2007)
SFP Longitudinal Evaluation

• Random assignment of 33 Iowa public schools
  ▫ 446 families (greater % economically stressed)

• Intervention families:
  ▫ 161 families
  ▫ 21 SFP groups (3-15 families each)
  ▫ 11 different schools

• Followed parents & youth from 6\textsuperscript{th} grade-12\textsuperscript{th} grade, follow-up at 21 years old
### What do the data say?

#### Long-term Youth Outcomes

<table>
<thead>
<tr>
<th>Outcome*</th>
<th>7(^{th}) grade</th>
<th>8(^{th}) grade</th>
<th>10(^{th}) grade</th>
<th>12(^{th}) grade</th>
<th>21 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Used Alcohol</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayed Substance Use Initiation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Decreased Methamphetamine Use</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decreased Prescription Drug Misuse</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Improved Academic Success</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Decreased Aggressive Behavior</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Internalizing Symptoms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slower rate of increase across 6-12(^{th}) grade</td>
</tr>
<tr>
<td>Polysubstance Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slower rate of increase across 6-12(^{th}) grade</td>
</tr>
</tbody>
</table>

*Boxes without a check mark: no results OR studies not yet conducted*
What do the data say?:
Indirect Effects

6th Grade

- SFP
- Increased Parental Competence
- Decreased Youth Substance Use Risk

8th Grade

- Increased School Engagement

10th Grade

- Increased Academic Success

Spoth, Randall, & Shin (2008)
What do the data say?:
Indirect Effects

- **6th Grade**: SFP
- **6th-12th Grade**: Delayed Substance Use Initiation
- **21 years old**: Reduced Drunkenness & Polysubstance Use

Spoth, Trudeau et al. (2009)
SFP 10-14 National Recognitions

- Blueprints Promising Program – Center for the Study and Prevention of Violence
- US Department of Health and Human Services - Center for Substance Abuse Prevention
- National Institute on Drug Abuse
- US Department of Justice - Office of Juvenile Justice and Delinquency Prevention
- Substance Abuse Mental Health Services Administration
- US Department of Education
- 4-H Program of Distinction
- Annie E. Casey Foundation Family Strengthening Award
SFP 10-14 Global Recognitions

International Meta Analysis:
Study of 6000 Adolescent Alcohol Reduction Programs

- Funded by the World Health Organization in 2001
- Conducted by Foxcroft and colleagues - Oxford Brookes University, Oxford, England
- Used strict criteria following the approach of the International Cochrane Collaboration, Drugs and Alcohol Review Group
SFP 10-14 Global Recognitions

The Cochrane Collaboration found SFP 10-14 to be the most promising effective intervention over the longer-term for the primary prevention of alcohol misuse.
Pennsylvania’s Approach

Disseminating evidence-based programs for public health
Pennsylvania’s Approach to improving youth/family outcomes:

Create sustained, community-wide public health impact through effective community coalitions using proven-effective programs targeted at strategically identified risk and protective factors

ULTIMATELY….

• Create community-level infrastructure for strategic prevention planning and coordination
• Provide accountability
• Maximize the efficient use of scarce resources
• “Move the needle” on key indicators of (behavioral) health at the POPULATION level
Number of Counties with At Least One EBI

- **2005**: 29
- **2006**: 42
- **2007**: 43
- **2008**: 45
- **2009**: 53
- **2010**: 55
- **2011**: 59

The graph shows an increasing trend in the number of counties with at least one EBI from 2005 to 2011.
Placements as a percent of juvenile court dispositions
(includes disposition reviews and new allegations)
Impact on Youth Placement: 1-day Census
comparison of counties with and without an EBI

Juvenile Court Placement Rates:
Comparison of Placement Rates for Counties* With and Without an EBI

Cost-Effectiveness

Using Pennsylvania data to understand savings
## Cost of Placement of **ONE** Juvenile in PA Facilities

Rates established by the Pennsylvania Department of Public Welfare

<table>
<thead>
<tr>
<th>Name of Facility</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Forestry Camp # 2</td>
<td>$91,615</td>
</tr>
<tr>
<td>Youth Forestry Camp # 3</td>
<td>$108,040</td>
</tr>
<tr>
<td>Youth Development Center</td>
<td>$120,085</td>
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<tr>
<td>Cresson Secure Treatment</td>
<td>$128,845</td>
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<tr>
<td>Youth Development Center</td>
<td>$147,095</td>
</tr>
<tr>
<td>North Central Secure</td>
<td>$152,935</td>
</tr>
<tr>
<td>South Mountain Secure Treatment</td>
<td>$162,425</td>
</tr>
</tbody>
</table>
Placement or Prevention
Which is more cost effective?

Average annual cost for *ONE* adjudicated youth is
$130,149

How many families can you serve with SFP 10-14?

\[ \text{Average annual cost for ONE adjudicated youth} = \$130,149 \]

\[ \text{Number of families served with SFP 10-14} \]
County “X” has 6 delinquent youth requiring placement into state operated residential programs this year.

TOTAL price annually for these six youth = $780,894

Cost based on average annual cost per youth, $130,149
$780,894 Spent on Incarceration

OR

for the same cost...

Effective prevention programs.
Return On Investment

• Analyses by researchers from the Partnerships in Prevention Science Institute have found:

• Economic returns of up to $9.60 for every dollar spent implementing SFP 10-14

• A cost benefit of at least $5,923 for each participating youth/family
The Potential Benefits of SFP 10-14:

- Improved **Well-Being** of Children, Families, Schools and Communities
- Improved **Academic Achievement**, Including Higher Graduation and Post Education Rates
- Improved **Employment** Rate & Earning Power

- Decreased Child Abuse, Neglect, & Out-of-Home Placements
- Reduced Substance Abuse & Treatment Services
- Decreased Healthcare & Mental Health Service Costs
- Decreased Use of Welfare and Social Services
- Decreased Criminal Offenses & Prison Costs

**Significant Cost Savings to Taxpayers!**
In Summary – SFP 10-14:

• Can benefit all families (*not just at-risk*) by reducing risks and building skills

• Has been rigorously evaluated and is nationally and globally recognized as an effective prevention program (*Blueprints*)

• Research has clearly *demonstrated an impact* on youth problem behaviors (*such as delayed initiation of and reduced substance use*)

• Is *cost-effective* (*cost-benefit of $9.60 for every $1 invested*)
Thank You!

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