What is the Evidence Base for Prevention in Adolescence?

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Intervention Spectrum

Prevention Science Framework

Define the Problem

Identify Risk and Protective Factors

Interventions

Program Implementation and Evaluation

Problem

Response
Etiology/Epidemiology of Problem Behaviors
- Identify risk and protective factors that predict problem behaviors and describe their distribution in populations.

Efficacy Trials
- Design and test preventive interventions to interrupt causal processes that lead to youth problems.

Prevention Services Research
- Apply lessons learned about etiology and effective interventions in real world settings.
## Risk Factors for Adolescent Problem Behaviors

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<tbody>
<tr>
<td><strong>Community</strong></td>
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<td>Availability of Firearms</td>
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<td>Transitions and Mobility</td>
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<tr>
<td>Family</td>
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<td><strong>Lack of Commitment to School</strong></td>
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<tr>
<td>Individual/Peer</td>
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<td>Early and Persistent Antisocial Behavior</td>
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</table>
Protective Factors

Individual Characteristics
- High Intelligence
- Resilient Temperament
- Competencies and Skills

In each social domain (family, school, peer group and neighborhood)
- Prosocial Opportunities
- Reinforcement for Prosocial Involvement
- Bonding
- Healthy Beliefs and Clear Standards
Snowball: Risk Accumulates Through Early Developmental Challenges without Protection

Snowstorm: Extended Exposure to Positive Substance Use Norms and Models of Problem Behavior without Protection

Toumbourou and Catalano, 2005
Prevalence of 30 Day Alcohol Use by Number of Risk and Protective Factors

Six State Student Survey of 6th-12th Graders, Public School Students
Prevalence of Any Other Illicit Drug Use (Past 30 Days) By Number of Risk and Protective Factors

Six State Student Survey of 6th - 12th Graders, Public School Students

Prevalence

Number of Risk Factors

Number of Protective Factors

- 0 to 1
- 2 to 3
- 4 to 5
- 6 to 8
- 9 or More

Prevalence vs. Number of Risk Factors
Prevalence of “Attacked to Hurt”
By Number of Risk and Protective Factors

![Graph showing the prevalence of "Attacked to Hurt" by number of risk and protective factors. The graph plots the percentage of prevalence against the level of risk and protection. Each level of protection is represented by different markers and colors. The graph shows an increasing trend in prevalence as the level of risk increases.]
Prevalence of Mental and Social Problems by Number of Risk Factors

Bond, Thomas, Toumbourou, Patton, and Catalano, 2000
Number of School Building Risk Factors and Probability of Meeting WASL Standard (10th Grade Students)

Arthur and Brown, 2006
Number of School Building Protective Factors and Probability of Meeting WASL Standard (10th grade students)

Arthur and Brown, 2006
Why a Place Based Approach?
Communities Vary in Risk Exposure

John A. Pollard, Ph.D.  Developmental Research and Programs

Insufficient number of students in this area.

Neighborhood #2

No students in this area.

Neighborhood #1

Neighborhood #3

Risk Factors
- 1.005 - 2.949
- 2.949 - 4.894
- 4.894 - 6.838
- 6.838 - 8.782
- 8.782 - 10.727

Major roads
Interstate

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Prevention Science Research Advances

Etiology/Epidemiology of Problem Behaviors
- Identify risk and protective factors that predict problem behaviors and describe their distribution in populations.

Efficacy Trials
- Design and test preventive interventions to interrupt causal processes that lead to youth problems.

Prevention Services Research
- Apply lessons learned about etiology and effective interventions in real world settings.
Effectiveness of Prevention Policies and Programs Reviewed in 7 Areas

- Violence
- Substance Misuse (excluding Tobacco)
- HIV/STI
- Unintended Pregnancy
- Traffic Crashes and Risky Driving
- Obesity
- Mental Health
What is an efficacious intervention?

**Evaluation Quality**
- At least one randomized controlled trial OR a quasi-experimental trial without design flaws

**Impact**
- Impact on adolescent problem behavior
- Absence of any negative effects

**Intervention Specificity**
- Population of focus is clearly defined
- Risk and protective factors that program seeks to change are identifiable

**Implementation Tools**
- Training materials are available
- Information on the financial and human resources required
Prevention Policy Example

Raising the Minimum Legal Drinking Age

Problem: Traffic Crashes, Risky Alcohol Use

Response: Raise Min. Legal Drinking Age

Result: Reduced Alcohol Consumption, Reduced Crashes, Crash Injury, and Fatalities

Wagenaar and Toomey, 2002
Prevention Program Example
Nurse Family Partnership

Problem: Poor Birth and Early Childhood Outcomes
Risk: Poor Diet And Drug Use Prot.: Parenting Competence And Bonding

Protocol for Nurse Visits During Pregnancy And 2 yrs. Post Birth

Response: Olds et al., 2002

Mom: Less welfare
More employment, Fewer Arrests and Subsequent Births,
<Interval Between births
Child: Less Child Abuse/Neglect, Less Arrests at 15
Wide Ranging Approaches Have Been Found To Be Efficacious

<table>
<thead>
<tr>
<th>Prevention Programs/Policies</th>
<th>Violence</th>
<th>Drug Use</th>
<th>HIV STI</th>
<th>Unintended Pregnancy</th>
<th>Vehicle Crash Risk</th>
<th>Obesity</th>
<th>Mental Health</th>
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<tr>
<td>1. Prenatal &amp; Infancy Programs (eg., NFP)</td>
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<td>5. Mentoring with Contingent Reinforcement</td>
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<td>6. Cognitive Behavior Therapy</td>
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<td>7. Classroom Organization, Management and Instructional Strategies</td>
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<td>8. Classroom Curricula</td>
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<td>9. Community Based Skills Training/Motivational Interviewing</td>
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<td>10. Cash Transfer for School Fees/Stipend</td>
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<td>11. Multicomponent Positive Youth Development</td>
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<td>12. Policies (eg., MLDA)</td>
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<td>13. Community Mobilization</td>
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<td>15. Law Enforcement</td>
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Criteria for Selection of Illustrative Programs

- Randomized or quasi-experimental designs
- Statistically significant effect on problem behaviors during adolescence at least one year post intervention
- Operate during childhood or adolescence
- Examples address both snowball and snowstorm risk patterns
- Some diversity in global context
Illustrative Efficacious Prevention Policies
Age 12-18

- **Adolescent Access to Contraceptives** (Brindis et al., 2003; Foster et al., 2006; Boonstra et al., 2010; Guldi, 2008; Zavodny, 2004; Kearney & Levine, 2009)

- **Graduated Driver Licensing** (Shope, 2007)

- **Increased Taxes on Alcohol** (Wagenaar et al., 2009; Elder et al., 2010)

- **Minimum Legal Drinking Age 21** (Wagenaar & Toomey, 2002)