

# Prevention Science and Mental Health

## Current Challenges and Opportunities

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# Mission

## Society for Prevention Research

- n The Society for Prevention Research seeks to advance science-based prevention programs and policies through empirical research.

# SPR's Members

700 researchers and practitioners actively engaged in conducting prevention research on a wide range of topics from violence to obesity, lung cancer to depression.

# The Premise of Prevention Science

To prevent a problem before it happens, the factors that predict the problem must be changed.

# The Prevention Science Framework (SPR – 2005)

1. Epidemiologic and etiologic studies have identified risk and protective factors that influence health and behavior. These should be targeted by preventive interventions.
2. Careful experimental evaluation enables identification of programs and policies that can prevent health and behavior problems.

# The Prevention Science Framework

3. Through rigorous evaluation, preventive interventions have been identified that have demonstrated efficacy to prevent the development of health, mental health, and behavior problems.
4. Public funds might be more productively used by implementing policies and programs that have been tested and found to be effective.

# The Prevention Science Framework

5. We have reached a stage where interventions need to be evaluated in real-world settings and research needs to be conducted on how to effectively disseminate empirically supported policies and programs.
6. Ongoing monitoring of well-being, problem behavior, and risk and protective factors is an essential practice for guiding prevention efforts and ensuring they achieve effects.

# Prevention Principle 1: To Prevent, Address Predictor

Epidemiologic and etiologic studies have identified risk and protective factors that influence health and behavior. These should be targeted by preventive interventions.

# Risk Factors for Adolescent Problem Behavior

<b>Risk Factors</b>	<b>Substance Abuse</b>	<b>Delinquency</b>	<b>Teen Pregnancy</b>	<b>School Drop-Out</b>	<b>Violence</b>	<b>Depression &amp; Anxiety</b>
<b>Community</b>						
<b>Availability of Drugs</b>	✓				✓	
<b>Availability of Firearms</b>		✓			✓	
<b>Community Laws and Norms Favorable Toward Drug Use, Firearms, and Crime</b>	✓	✓			✓	
<b>Media Portrayals of Violence</b>					✓	
<b>Transitions and Mobility</b>	✓	✓		✓		✓
<b>Low Neighborhood Attachment and Community Disorganization</b>	✓	✓			✓	
<b>Extreme Economic Deprivation</b>	✓	✓	✓	✓	✓	

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<b>Family</b>						
<b>Family History of the Problem Behavior</b>	✓	✓	✓	✓	✓	✓
<b>Family Management Problems</b>	✓	✓	✓	✓	✓	✓
<b>Family Conflict</b>	✓	✓	✓	✓	✓	✓
<b>Favorable Parental Attitudes and Involvement in the Problem Behavior</b>	✓	✓			✓	

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<b>School</b>						
<b>Academic Failure Beginning in Late Elementary School</b>	✓	✓	✓	✓	✓	✓
<b>Lack of Commitment to School</b>	✓	✓	✓	✓	✓	

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<b>Individual/Peer</b>						
<b>Early and Persistent Antisocial Behavior</b>	✓	✓	✓	✓	✓	✓
<b>Rebelliousness</b>	✓	✓		✓		
<b>Friends Who Engage in the Problem Behavior</b>	✓	✓	✓	✓	✓	
<b>Favorable Attitudes Toward the Problem Behavior</b>	✓	✓	✓	✓		
<b>Early Initiation of the Problem Behavior</b>	✓	✓	✓	✓	✓	
<b>Constitutional Factors</b>	✓	✓			✓	✓

# Protective Factors:

- n Individual Characteristics
  - High Intelligence
  - Resilient Temperament
  - Competencies and Skills
- n In Social Environments (family, school, peer group and neighborhood)
  - Prosocial Opportunities
  - Reinforcement for Prosocial Involvement
  - Bonding or Connectedness
  - Clear and Healthy Standards for Behavior

- n Studies have also identified “promotive” factors that predict mental health. Identification of these creates opportunities for empirically based mental health promotion interventions.

# Continuing Needs

- n Research to identify individual and environmental risk factors for mental health disorders.
- n Research to identify and understand promotive and protective factors and processes.

# Prevention Principle 2: Controlled Trials Are Necessary

- n Careful experimental evaluation enables identification of programs and policies that can prevent health, mental health, and behavior problems.

# SPR's Standards of Evidence provide criteria for conducting efficacy and effectiveness trials

n View them on line at :

– [www.preventionresearch.org](http://www.preventionresearch.org)

– *Make them the standards this committee endorses for identifying tested and effective preventive policies and programs!*

– *Make them the standards this committee endorses for making lists of "model" prevention policies and programs.*

# Principle 3: Advances Have Been Made through Efficacy Trials

- n Rigorous evaluations have identified both ineffective and effective prevention policies, programs and actions.

# Replicated Effective Violence and Substance Abuse Prevention Programs

**Nurse Family Partnership**

**The Incredible Years**

**Promoting Alternative Thinking Strategies**

**Bullying Prevention Program**

**Life Skills Training**

**Midwestern Prevention Project**

**Toward No Drug Abuse**

**Big Brothers Big Sisters**

**Multidimensional Treatment Foster Care\*\*\***

**Multisystemic Therapy**

**Functional Family Therapy**

*Source: Center for the Study and Prevention of Violence: Blueprints Project, University of Colorado. Delbert Elliott P.I.*

# Mental Health Problems Can Be Prevented

n Example: Mental health outcomes fifteen years after intervention from

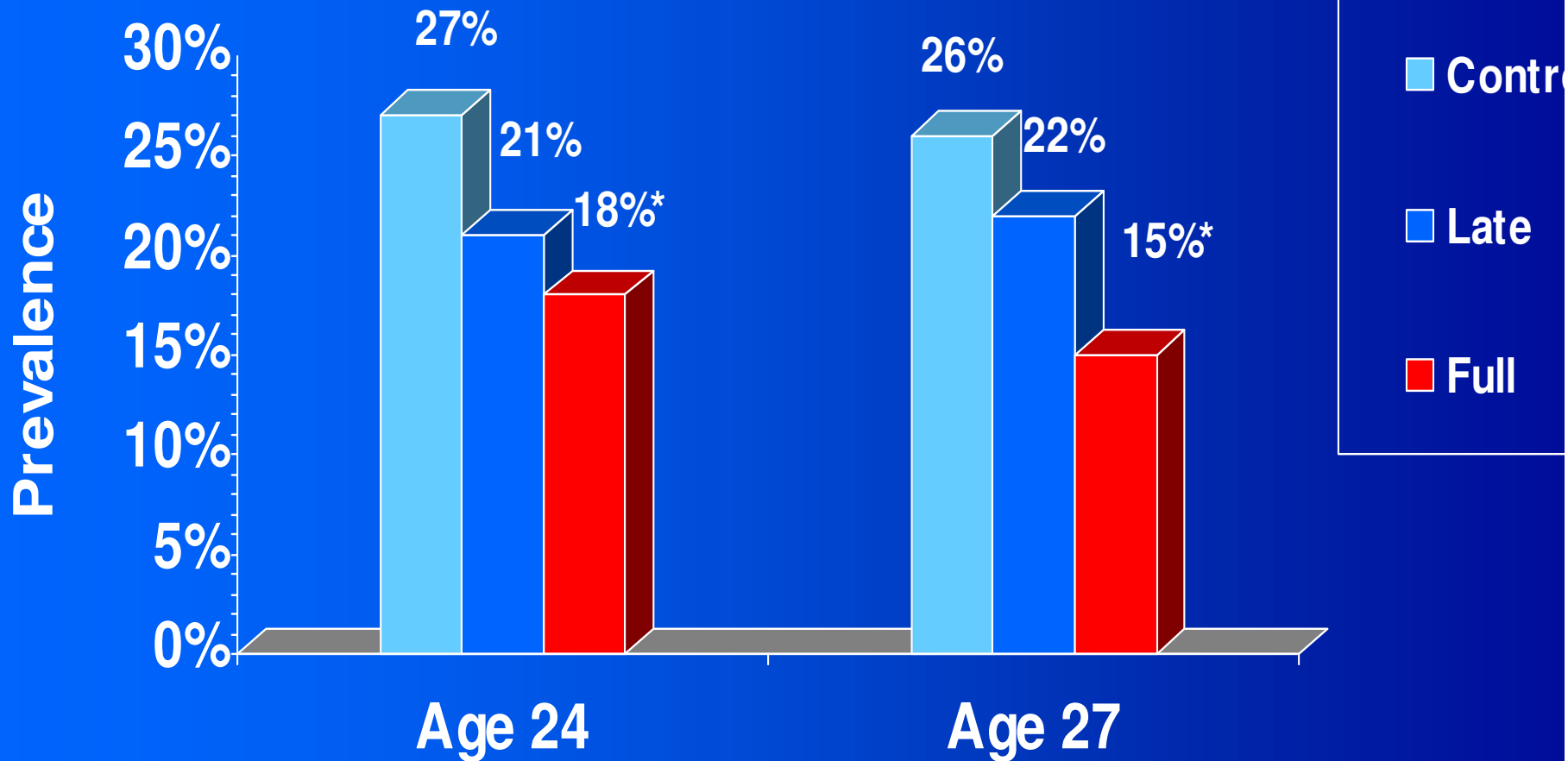
Seattle Social Development Project

A universal preventive intervention in urban elementary schools

# SSDP: Intervention Components

- n Component One: ***Teacher Training in Classroom Instruction and Management***
- n Component Two: ***Parent Training in Behavior Management and Academic Support***
- n Component Three: ***Child Social and Emotional Skill Development***

**G** *SSDP: Proportion in 3 Conditions Who Met Criteria for GAD, social phobia, MDE, or PTSD diagnosis at ages 24 and 27.*



\* $p < .05$

# Principle 5: Effectiveness and Dissemination Trials are Needed

We have reached a stage where interventions need to be evaluated in real-world settings and research needs to be conducted on how to effectively disseminate empirically supported policies and programs.

# Dissemination Requires Capacity

- n Published material including manuals, guide curricula.
- n Certification of trainers.
- n High quality, readily available technical assistance.
- n Dissemination organization committed to distribution and delivery of tested program.
- n Data monitoring system to provide feedback on implementation fidelity and outcomes

# Effective Dissemination Requires Implementation Fidelity and Methods to Measure It.

- n Program Definition
- n Adherence
- n Dosage / exposure
- n Quality
- n Participant responsiveness

# Effectiveness Trials May Require Braiding of Service and Research Funding

# The Senate Appropriations Committee report accompanying its FY 2007 Labor-HHS Education Appropriations bill (S. 3708, as approved by the Committee on July 20, 2006)

*The Committee strongly supports the Department's efforts to carry out congressionally authorized evaluations of Federal education programs using rigorous methodologies, particularly random assignment, that are capable of producing scientifically valid knowledge regarding which program activities are effective. To ensure that authorized evaluations are conducted in a rigorous manner that is independent of the program office and includes scientific peer review, the Committee believes that the Institute of Education Sciences should be the lead agency for the design and implementation of these evaluations. The Committee believes further that it is essential for program offices to work collaboratively with the Institute to include a priority or requirement in program solicitations for grantee participation in such evaluations, including random assignment, to the extent the Institute deems appropriate and where not specifically prohibited by law. (Sen. Rept. 109-287, July 20, 2006, p. 287)*

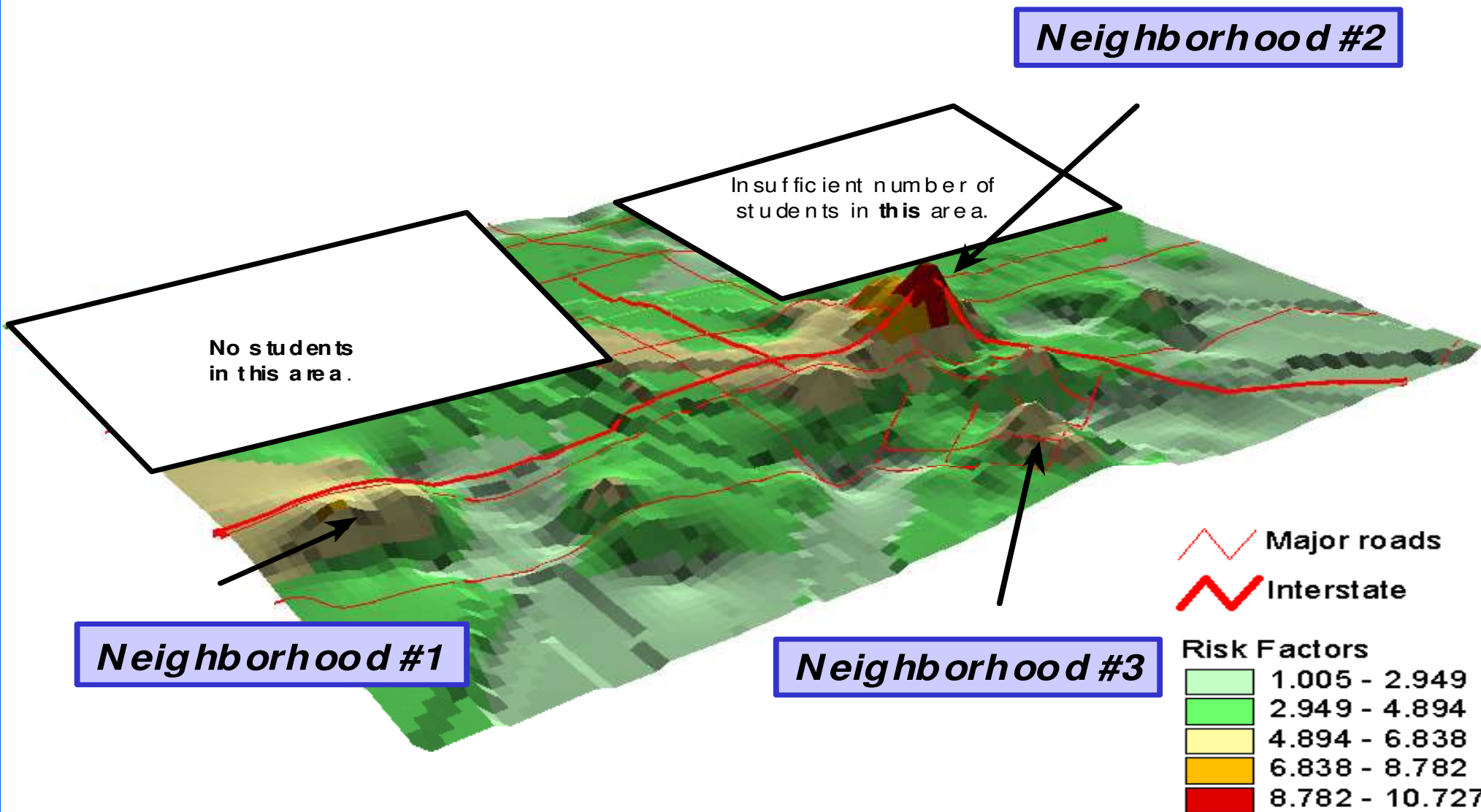
# Prevention Principle 6

- n Ongoing monitoring of well-being, problem behavior, and risk and protective factors for problems is an essential practice for guiding prevention efforts and ensuring they achieve effects.

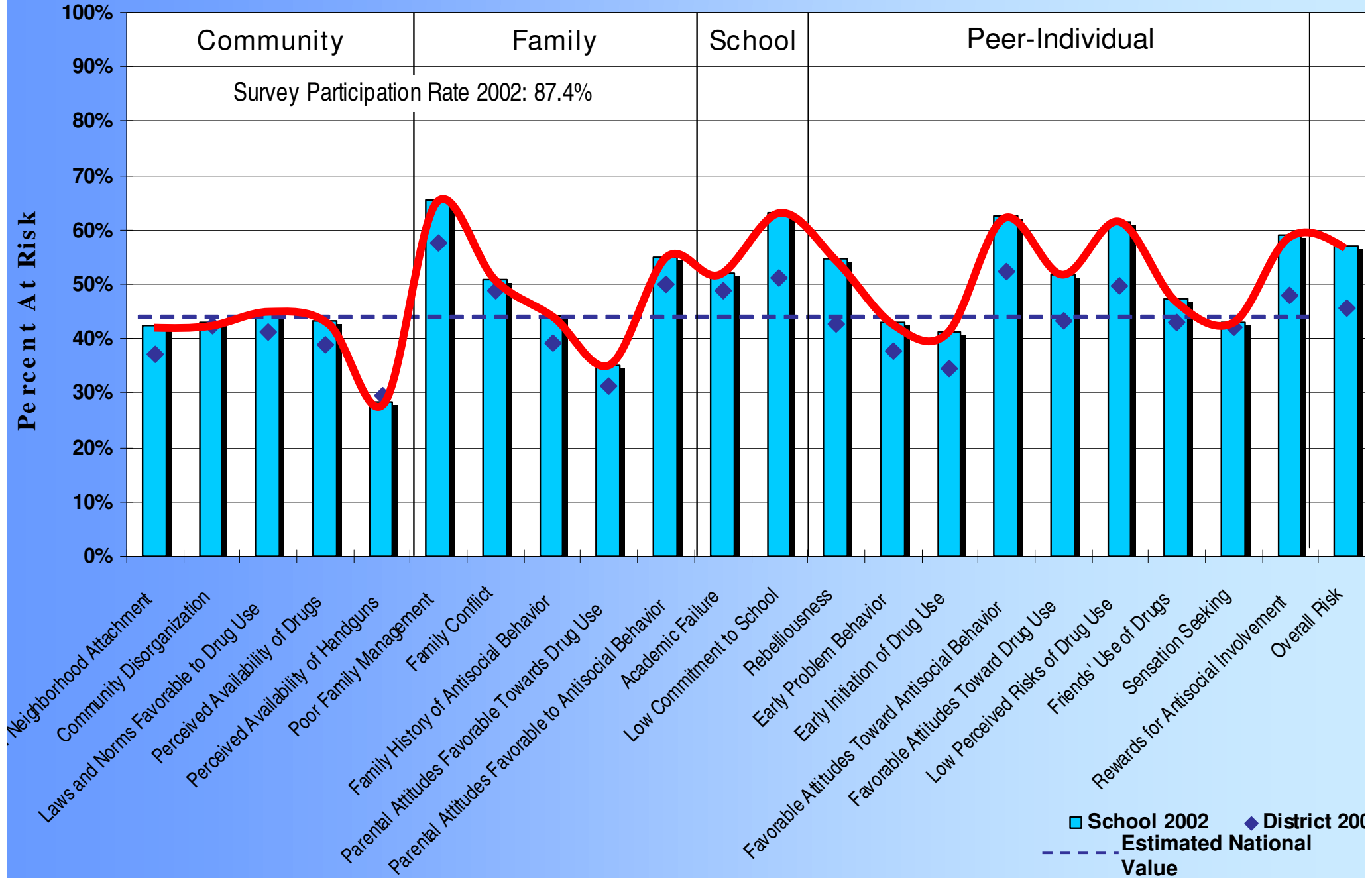
# Why Community Level Monitoring?

- n Different communities and neighborhoods have different profiles of risk and protection.
- n Community levels of risk and protection predict community levels of youth drug use, achievement test passage, and other outcomes.

# Total Aggregated Risk Factors in Different Neighborhoods of a City

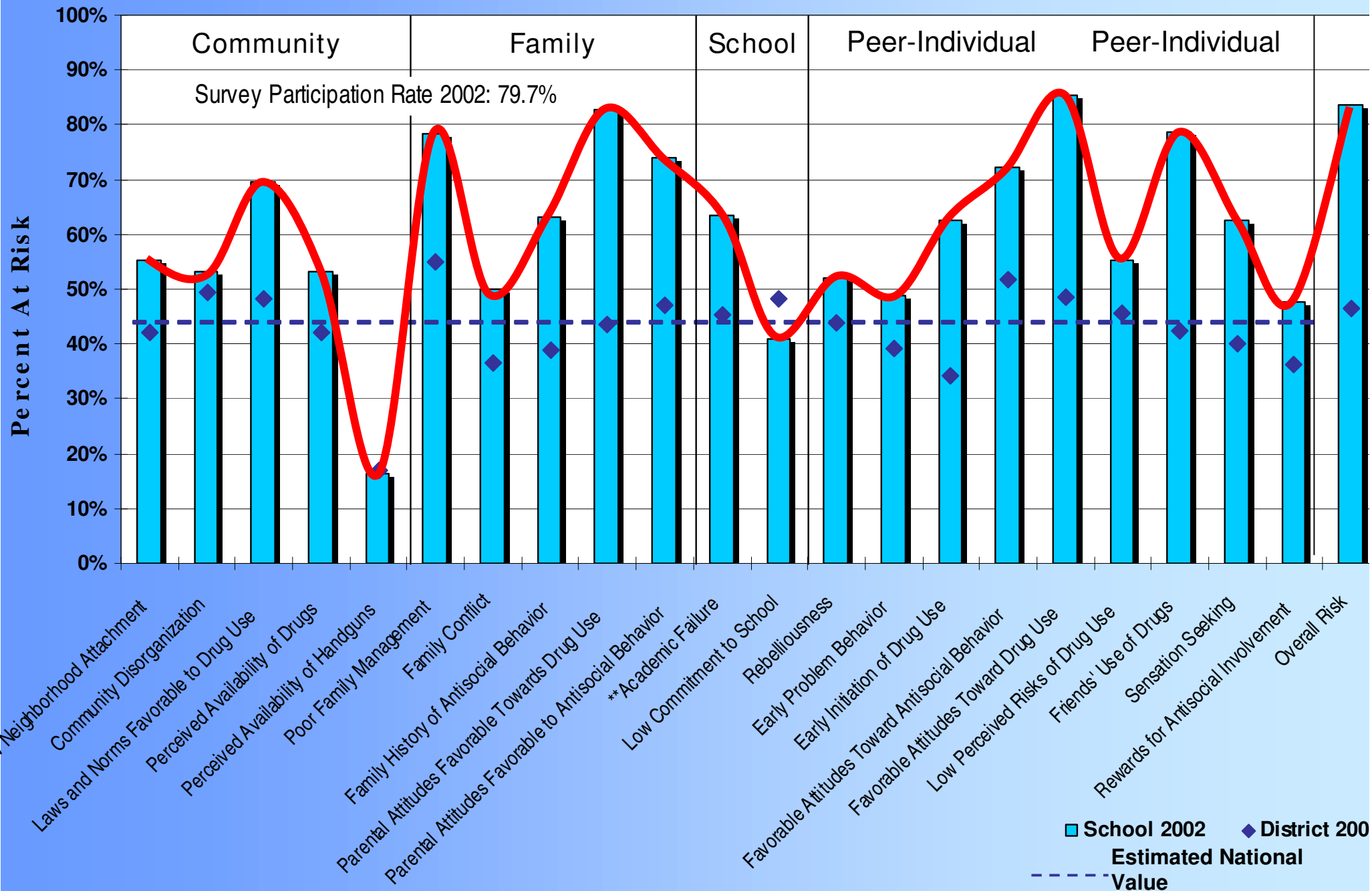


# Madison Middle School Risk Profile 8<sup>th</sup> Grade 2002





# Nova High School Risk Profile 10<sup>th</sup> Grade 2002

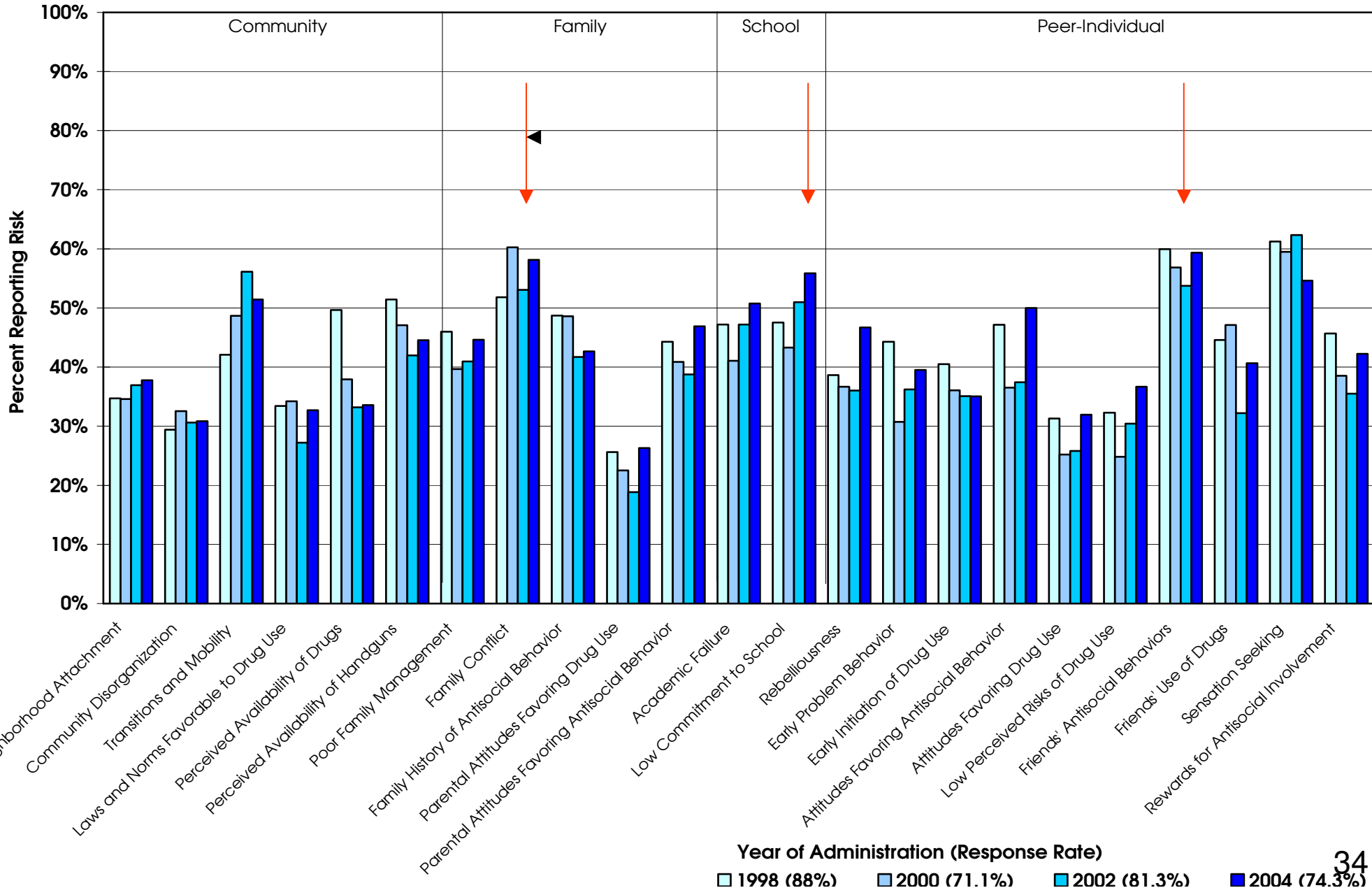


# The Challenge for Community Prevention

To identify and address those risk factors that are most prevalent and those protective factors that are most depressed in the community with tested effective policies and programs.

# Risk Factor Profile – Community T

**8th Grade: 1998, 2000, 2002 and 2004**



# SPR's Community Monitoring Resource

- n *Community Monitoring Systems: Tracking and Improving the Well-Being of America's Children and Adolescents*
- n Available on line at :
  - [www.preventionresearch.org](http://www.preventionresearch.org)

# Recommendations

- n Synthesize current evidence regarding individual and environmental risk and protective factors for adolescent mental health disorders AND promotive factors for mental health.
- n Use SPR's standards of evidence as the committee's standards for evaluating preventive and promotive interventions.
- n Synthesize current knowledge regarding efficacious and effective preventive interventions for adolescent and young adult mental health problems AND promotive interventions for mental health.

# Recommendations

- n Encourage funding for effectiveness and dissemination trials and linking service and research resources to conduct them.
- n Advocate for the development of implementation fidelity measurement systems.
- n Promote the use of systems for community level monitoring of risk, protection and mental health.

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# ***Seattle Social Development Project***

***Social Development Research Group  
School of Social Work  
University of Washington***

J. David Hawkins – *Principal Investigator*

Karl G. Hill, Richard Catalano, Rick Kosterman,  
Robert Abbott, Todd Herrenkohl – *Investigators*

Jennifer Bailey, Sabrina Oesterle, *Research Scientists*

*Funded by National Institute on Drug  
Abuse; National Institute of Mental  
Health; National Institute on Alcohol  
Abuse and Alcoholism; Office of  
Juvenile Justice and Delinquency  
Prevention; Robert Wood Johnson  
Foundation*



# SSDP Design

- Initiated full intervention and control conditions in 1981 in 8 Seattle elementary schools.
- Expanded in 1985 to 18 Seattle elementary schools to add a late intervention condition, a parent training only condition, and additional control students.
- **Quasi-experimental study**
  - Full treatment (grades 1-6) = 149**
  - Late treatment (grades 5-6) = 243**
  - Control = 206**
  - Parent training only (grades 5-6) = 210**

# SSDP Intervention Effects Compared to Controls

- At the end of the 2<sup>nd</sup> grade
- boys **less aggressive**
  - girls **less self-destructive**

By the start of 5<sup>th</sup> grade, those in the full intervention had

- less initiation of **alcohol**
- less initiation of **delinquency**
- better **family management**
- better **family communication**
- better **family involvement**
- higher **attachment to family**
- higher **school rewards**
- higher **school bonding**

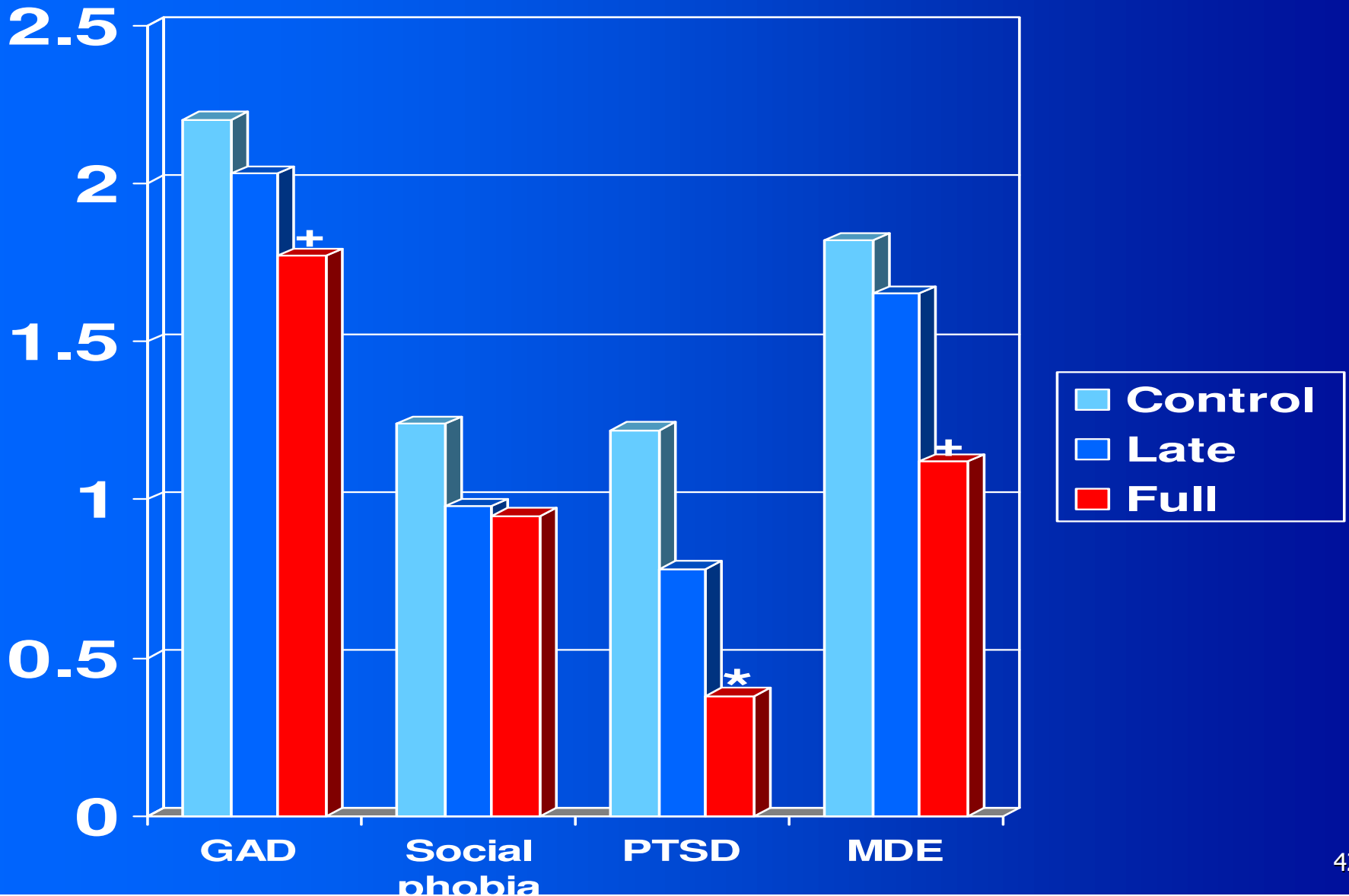


Grade 1 2 3 4 5 6 7 8 9 10 11 12

Age 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

# Seattle Social Development Project

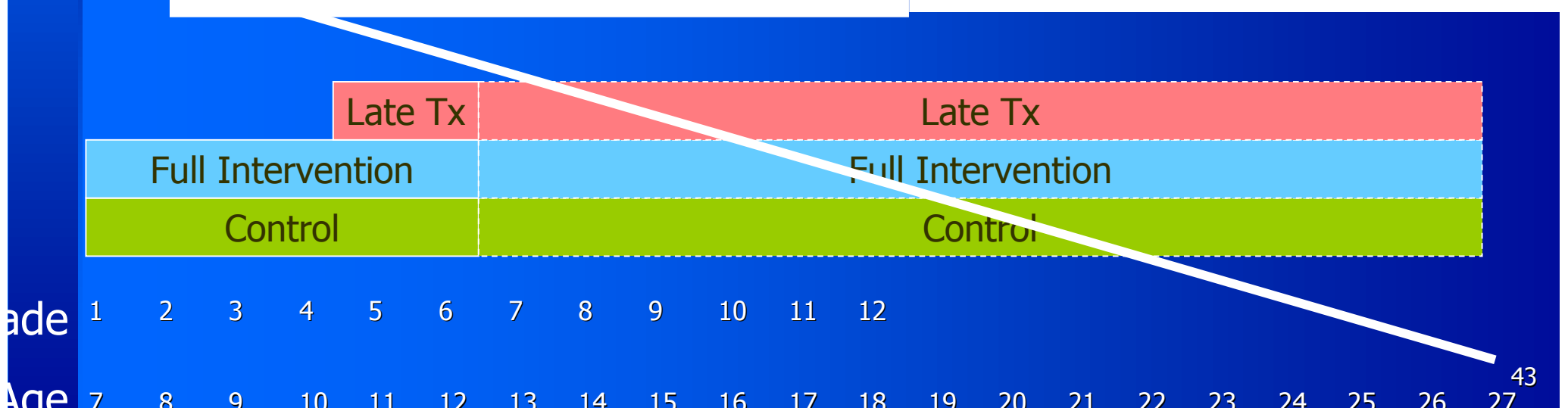
## *Age 27 Mental Health Symptom Criterion Count*



# SSDP Full Intervention Outcomes Compared to Controls at Age 27

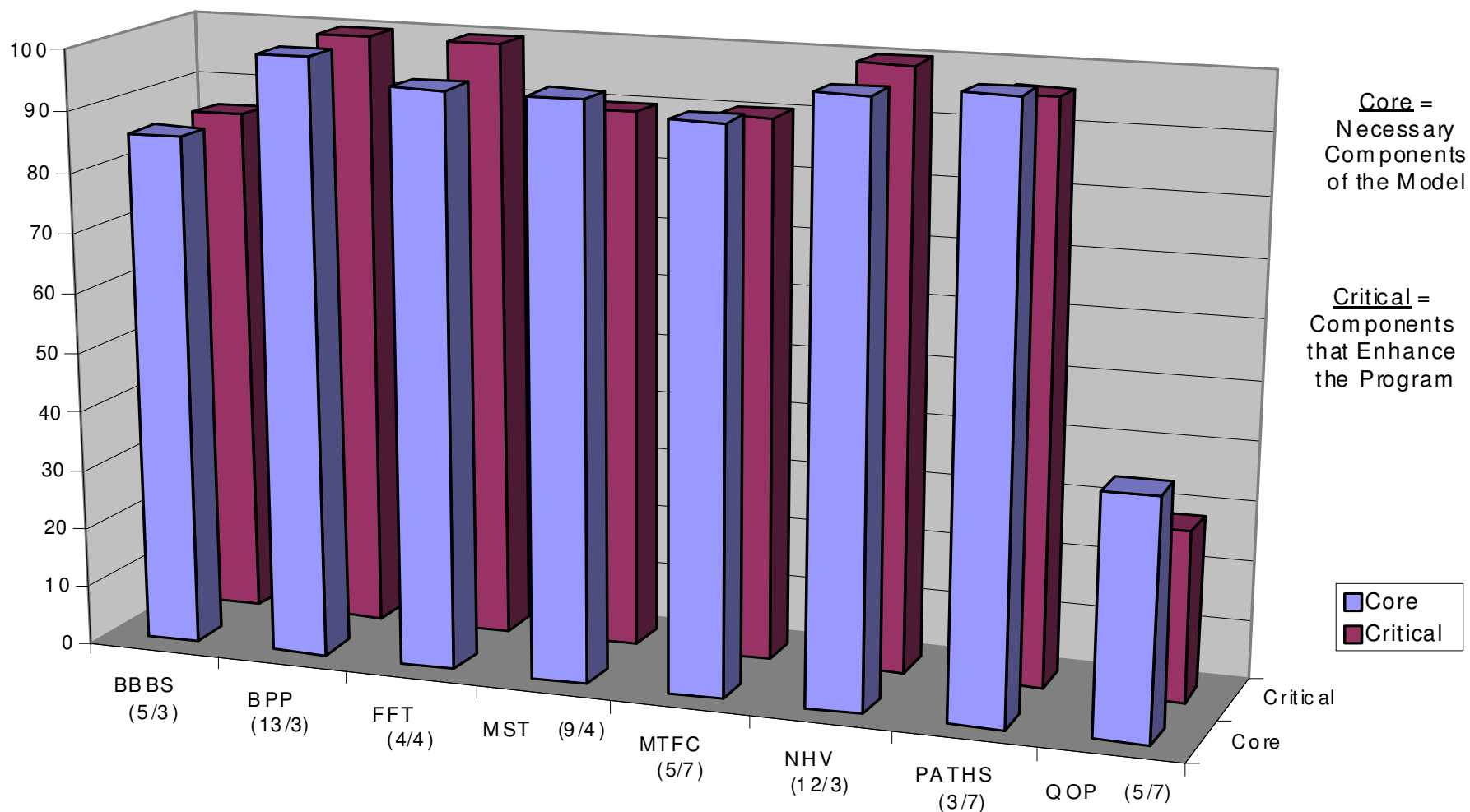
**By age 27 fewer in the Full Intervention met criteria for**

GAD diagnosis:	7% Control vs. 3% Full
social phobia diagnosis:	8% Control vs. 4% Full
PTSD diagnosis:	8% Control vs. 3% Full
MDE diagnosis:	15% Control vs. 11% Full



# Implementation Fidelity Can Be Achieved (Elliott & Mihalic – Blueprints Project)

Chart 2  
Core and Critical Component Progress - 2 years  
Percentage of All Core and Critical Components Achieved



# But...

- § **Prevention approaches that do not work or have not been evaluated have been more widely used than those shown to be effective.**

(Gottfredson et al 2000, Hallfors et al 2000, Hantman et al 2000, Mendel et al 2000, Silvia et al 1997)

# Why Community Prevention?

- n Prevention policies and programs are implemented at the local level.
- n Without implementation by local practitioners, whether mental health workers, public health nurses, parents, teachers, liquor store clerks, or police, tested and effective policies and programs are likely to fail to achieve effects.