School-Based Prevention: Current Status and Future Challenges

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“Even though our society does not emphasize this, the most important use of knowledge and education is to help to understand the importance of engaging in more wholesome actions and bringing about the discipline within our minds.

The proper utilization of our intelligence and knowledge is to effect changes from within that develop a good heart.”

HIS HOLINESS THE DALAI LAMA (1998)
What I will Discuss

- Recent Findings on Social and Emotional Learning
- Why the Role of Schools is Essential
- 3 Current and Future Research Challenges in School-Based Prevention
Why is School-Based Prevention Critical to Community Well-Being?

• Treatment (even when effective) will not substantially reduce the number of new “cases”

• Schools are the primary setting in which problems arise and can be prevented

• Building protective factors to promote good mental health reduces the burden on multiple forms of later disease/poor outcomes

• School-based prevention have been shown to impact not only mental health but also academic outcomes
School-Based Prevention
What has been Accomplished since 1994:

• The number of evidence-based interventions (EBIs) has grown substantially
• RCTs have been crucial in legitimizing prevention efforts
• Most still require independent replication
• Reviews of these programs are now widely available
  - Campbell Collaboration
  - CDC - 2007 - Universal Programs and Violence

But still little focus on promoting positive development, citizenship, healthy behaviors

• The easy work is done!
Effective Universal Programs

- **Social/Emotional Cognitive Violence Prevention**
  - Responding in Peaceful and Positive Ways
  - Interpersonal Cognitive Problem Solving
  - Promoting Alternative Thinking Strategies (PATHS)
  - Increased Social Awareness/Social Problem Solving
  - Responsive Classroom

- **Drug/Alcohol Prevention**
  - Life Skills Training
  - All Stars

- **Family Focused Intervention**
  - Triple P
  - Strengthening Families: 10-14 *Iowa*

- **Ecological**
  - School Transition Project
  - Child Development Project
  - Good Behavior Game/Mastery Learning

- **Multi-Domain**
  - Linking the Interests of Families and Teachers
  - Seattle Social Development Project
  - Incredible Years
Prevention and Improving the Public Health

Undesired Related Outcomes

- Poor School Achievement
- Poor Mental Health
- Aggression/Violence
- Early Substance Use

Underlying Shared Constraints

- Impulsive Action
- Emotion Dysregulation
- Insecure Relations w/ Parent, Teachers, Peers
- Dangerous Neighborhoods
Nurturing Resilience

- Self-Control/Emotion Regulation
- Cognitive Abilities – Problem Solving Skills
- Building Attention and Learning Capacity
- Healthy relations with peers and adults
- Safe, Welcoming, Caring Classrooms
Three Research Challenges

1. Moving from Efficacy or Effectiveness
2. Sustainability
3. Continue Development and Refinement of Programs and Models
**Types of Research**

*Type 1 translational research* applies basic science discoveries to intervention development.

The typical endpoint for Type 1 research is testing of promising new models of prevention to reduce risk and improve health and well-being.

*Type 2 translational research* investigates factors, models, and processes associated with the **adoption**, **implementation**, and **sustainability** of tested and effective prevention programs, policies, and practices in communities, services settings, and populations.
Translation 2 Defined

*Type Two Translation* is research on factors associated with the adoption, maintenance and sustainability of scientifically validated interventions by service systems under controlled, uncontrolled or uncontrollable conditions, i.e., services research.

It is Post-efficacy and -effectiveness research that leads to adoption, maintenance and sustainability of science-based interventions at the practice level.

In the real world, *translation of science-based practices*, stumble, largely unguided, toward uneven, incomplete and socially disappointing outcomes. Put simply T2 can be simple stated as “we need effective distribution system for effective products.”
T2 research requires new research skills regarding “implementation science”:

- Fielding and evaluating interventions in real world settings
- Understanding the factors that affect engagement or reach of interventions and policies
- Understand what factors affect implementation quality
- Understanding the factors that influence the sustained quality use of programs and policies
- What factors in management, organization, financing, training lead to effective outcomes?
Challenge #1
Implementation

An effective intervention is one thing........Implementation of an effective intervention is a very different thing
Implementation Of SEL Programs

- Why focus on implementation?
  - Programs will likely show no effect when implemented poorly
  - It is so important to build the right context to effectively implement programs
  - High quality implementation should support sustainability
“In theory there is no difference between theory and practice; in practice, there is.”

Yogi Berra
“Hey, no problem!”
MPP: Effects of Fidelity of Implementation: Marijuana Used in Last Month (N=42 Schools*)

*Approximately 5,000 6th and 7th grade students @ baseline and follow-up

Data from Pentz, Trebow, Hansen, MacKinnon, Dwyer, Johnson, Flay, Daniels, & Cormack
“My question is: Are we making an impact?”
Essential Components for PATHS

- Skill Building for Both Students and Teachers
- Generalization: Create opportunities to use these skills throughout the day
- Provide sufficient Technical Support to teachers
- Integrate into other Academic Subjects
- Involve Parents
What is Necessary for Quality Implementation?

- Initial Training — 2 day workshop
- PATHS Coach (PC) regularly visits each class
- PC receives ongoing technical assistance from PATHS Trainer
- Teachers use PATHS 2-3X/week for 20-30 minutes
**Planned Intervention**
- Program Model
- Quality of Delivery

**CLASSROOM LEVEL**
- Teacher characteristics and behaviors
- Classroom climate

**SCHOOL LEVEL**
- Administrative stability leadership/support
- School Goals & Climate

**DISTRICT LEVEL**
- Administrative leadership and support
- District Goals
- Communication with schools

**COMMUNITY LEVEL**
- School-Community Relations
- School-Family Relations
- Community Readiness
The Study of Implementation

Three Illustrations from Research with PATHS
Study #1
PATHS Curriculum
Implementation Quality
(Fast Track Project)
Teacher’s skill in teaching PATHS related to:
Teacher - rated behavior of students (TOCA-R)

- Concentration/Attention
- Aggressive/Disruptive Behaviors
- Social Competence
Study #2

Effectiveness Study- Harrisburg City Schools (PA)

- Distressed school district
- Low Achievement
- High Dropout Rate
- Effectiveness trial of the PATHS Curriculum in a real world setting
Evaluation Design

- Pre-post, quasi-experimental design
- 3 intervention and 3 control schools (24 classrooms: 13 intervention and 11 control)
- 350 students (41.74% males; 79.42% African American)
Fig 1. Differences in PATHS Effects in the Three Intervention Schools compared to the Comparison Schools
What Explained Differences Between The Schools in Outcome??

- Significant Implementation X Principal Support Interaction
- Schools with High Principal Support and High Teacher Quality had less aggression and higher social competence
The Effects of Leadership Development and Support on SEL Practices and Student Outcomes

- Professional development and support of school leadership teams
- Leadership competencies
- Leadership practices
- Leadership relationships

School and classroom effects:
- Programming
- Climate
- Partnerships

Student outcomes:
- Academic performance
- SEL competencies
- Reduced risk behaviors
PATHS Implementation Study
Six Schools
Simultaneous Multilevel Data Collection

• Building Level Measure
  - Climate survey of all professional staff
• Classroom Level Measure
  - Observer ratings of implementation quality
• Individual Level Measure
  - Teacher report of child behavior
All School Climate Measures were significantly related to implementation quality.

<table>
<thead>
<tr>
<th>Climate</th>
<th>PATHS Implementation</th>
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<tbody>
<tr>
<td>Teacher-Teacher Trust</td>
<td>1.52*</td>
</tr>
<tr>
<td>Orientation to Innovation</td>
<td>3.01*</td>
</tr>
<tr>
<td>Commitment to Community</td>
<td>2.02#</td>
</tr>
<tr>
<td>Collective Responsibility</td>
<td>1.47*</td>
</tr>
<tr>
<td>Focus on Learning</td>
<td>2.67*</td>
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Study Design

6 Buildings in an Urban District

Year 1

3rd Grade Social-Emotional Functioning

3rd Grade Teachers implemented the PATHS Curriculum bi-weekly

Year 2

4th Grade Academic Functioning

New teachers rated student functioning
Children who showed improved attention during PATHS in 3rd grade showed greater teacher-rated achievement in 4th grade.

### 4th grade outcomes

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<tr>
<th>3rd grade Growth Social-Emotional Skill</th>
<th>Engagement in Learning</th>
<th>Achievement</th>
</tr>
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<tbody>
<tr>
<td>Behavioral Dysregulation</td>
<td>-.24**</td>
<td>-.20*</td>
</tr>
<tr>
<td>Attention</td>
<td>.32**</td>
<td>.30**</td>
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*p < .05, **p < .01
Better Quality PATHS Implementation is related to Improved Attention and Social Competence

(-across 6 urban schools)

<table>
<thead>
<tr>
<th>Quality of Implementation</th>
<th>Aggression</th>
<th>Attention</th>
<th>Social-Competence</th>
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<td></td>
<td>-.01</td>
<td>.44**</td>
<td>.32*</td>
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*p < .05, **p < .01
End of Grade 3

PATHS Implementation

Grade 3

Attention

.35**

Engagement in Learning

.28*

.32*

Grade 4 Teacher Rating of Academic Functioning

.22ns
The Role of Teacher Characteristics and Environmental Supports

• Buss and Hughes
Teacher with Higher Meta-Emotion Scores (more positive view of teaching emotions) showed better lesson adherence and more positive ratings by PATHS consultants

• Ransford et al.
Principal support and quality of the school environment predict teachers report of implementation quality of PATHS
Central Research Questions
Challenges # 1

- We need a broadened “science of implementation”
- How effective are EBI programs under “real-world conditions? (requires comparison groups)
- How does implementation quality affect outcome?
- What factors influence the quality of implementation (Implementation quality IS the outcome!)?
Research Challenge #2

Developing Effective and Sustainable Prevention Programming and Policies in American Schools
Almost all programs that are provided through schools fail to be sustained and effective.

Implementation needs to occur not only at the level of the classroom, but at the organizational level of the school and the district.

This is a new and different business for education and schools have not developed the infrastructure necessary to plan, implement, monitor, evaluate, and sustain quality programs.
What Changes in Management, Organization, Financing, and Technical Assistance are necessary?

There is a need for a new structure in public school systems - An “Office of Social and Emotional Development”.

This office is focused on curriculum and policy and is NOT located with psychologists, counselors, social workers, and special educators, but in the central mission of schools - Curriculum. It involves both teacher training in quality teaching processes as well as specific curriculum.

Continuing to invest funding in prevention programs without investing in this infrastructure will lead to the inevitable problem of prevention being marginalized in schools and showing low quality and sustainability.
Research Challenge #2

This challenge truly requires a change in approach and philosophy from previous research paradigms.

- The questions is not how do we get schools to test the effectiveness of our exciting programs, but instead what supports and structures are necessary to implement with quality and create sustainable change in school prevention programming

- Engaging Schools in an Intentional Process - The CASEL Rubric
SEL Implementation and Sustainability Process

1. Principal commits to school-wide SEL
2. Engage stakeholders and form steering committee
3. Develop and articulate shared vision
4. Conduct needs and resources assessment
5. Develop action plan
6. Select evidence-based program
7. Conduct initial staff development
8. Launch SEL instruction in classrooms
9. Expand instruction and integrate SEL school-wide
10. Continue cycle of implementing and improving

Leadership

A. Provide ongoing professional development
B. Monitor and evaluate for continuous improvement
C. Develop infrastructure to support SEL
D. Integrate SEL framework school-wide
E. Nurture partnerships with families & communities
F. Communicate w/stakeholders (marketing)
Central Research Questions
Challenge # 2

- What factors influence the sustainability of evidence-based SEL in schools?
- How Do SEL Programs become a central part of long-term district operations? Alignment, Standards, Measurement Systems
- What factors in management, financing, training, and technical assistance lead to sustained use?
- What types of diffusion networks and TA most effectively support sustainability?
Research Designs for Challenge # 2

- Naturalistic/descriptive studies of the longer-term outcome of EBI programs and partnerships in communities

- Experimental trials that vary important features of systems development, training, financing, etc. to examine how variations in such factors influence sustainability
Research Challenge # 3

Type 1 Research

Continuing Development and Refinement of Preventive Intervention Programs and Models

- Developing New Models
- Combining already known effective models across contexts and time (PATHS X PAX)
- Understanding the mediational “causal” processes
Developing New Models

- Greater attention to interventions with Middle and High School Students
- Innovations in School-Family Partnership Interventions
- Using Brief Interventions (MI, Attitude Change)
- Developing Mindfulness for Children and Youth (Stress Reduction and Self-awareness)
Integrating EBI Models

- Combining behavioral/ecological and/or policy models with SEL models
- Combining intervention focused on teacher’s awareness and development with high quality SEL curriculum models
The Big Picture: Supporting Effective Social and Emotional Development

Teacher Well-Being and Awareness

Effective Conditions for Learning

Social and Emotional Skill Development
Understanding Causal Processes

How do EBI effects occur?

- Inside the Child
  - Social-Emotional
  - Cognitive
  - Neuro-physiological Change

- Classroom Level
  - Teacher Behavior
  - Classroom Atmosphere Context

- Intervention Support System (Indirect Effects)
  - Effects of TA
  - School Leadership
Mobile Laboratory
Neurobiological Assessments
Central Research Issues
Challenge # 3

✓ Will require experimental designs

✓ There is no longer a “true” control group: need to carefully study the experiences and interventions received by “controls”

✓ Innovation is hampered by the strictures of using group randomized trials (increased costs, reduced innovation, hampering new investigators)

✓ RCTs that are comparisons between programs
Cross-Cutting Issues

Systems Integration Across:

Developmental Stage
PreK-12 Coordinated Programming

Levels of Care
Universal, Selective, Treatment

Institutional Structures
Schools, Families, Community Services
Bottom Line:

- Evidence-Based Prevention Programs are being Broadly Disseminated.
- Innovative Models exist but need to be nurtured and supported to fully develop and mature.
- We have at best a fledgling “science of implementation” in school-based prevention
- We need a much fuller and differentiated understanding of the goals of educators. We need fuller partnerships with educational leaders to create better alignment of programming.
Thanks

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