Using Core Components to Optimize Family-Based Prevention in Title 1 Schools

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CORE COMPONENTS

Identifying core components can make research on evidence-based interventions (EBIs) more generalizable and EBIs more adaptable and scalable when implemented in social service settings.

(Blase, K. & Fixsen, 2013; Chorpita, Daleiden, & Weisz, 2005; Ferber, Wiggins & Sileo, 2019; Rotheram-Borus et al., 2018; Sutcliffe, Thomas, et al., 2015).
Phases of the Prevention Research Cycle

**Generative**
- Epidemiologic studies of risk factors and mental health problems
- Studies of potentially modifiable “resilience resources”

Develop “Small Theory” of intervention

**Intervention Design**
- Identify strategies to improve each of the resilience resources
- Assess consumer interests and needs for a program
- Assess recruitment methods
- Pilot test the program

Develop intervention manual

**Experimental Field Trial**
- Recruit into program
- Implementation of program
- Short term effects of the program
- Determine what parts of program work best and for whom.
- Long term effects

Develop prototype for diffusion

**Disseminate “Effective” Program**
- Organizational partners
- Training, supervision and maintaining program fidelity
- Cost and cost-benefit
- Effectiveness to accomplish shared goals

Sustained Implementation
School Based Promotion and Prevention

- Meta-analyses support efficacy of school-based interventions to promote socio-emotional learning and prevent multiple problem outcomes.
- Combined parent-youth programs offer strongest evidence of long-term effects on substance use and disorders.

(Durlak et al., 2010; O’Mara & Lind, 2013; Van Ryzin et al., 2016; Weisz et al., 2005)
A Middle School Promotion and Prevention Program

Targets the middle school transition as key turning point for students and families to promote lifelong success

Parents and Teens attend highly interactive sessions with other parents and teens

Original Program was 9 Sessions + 2 Home Visits + School Liaison
Goals of Teen Program

Uses skills training, home practice, peer-to-peer mentoring to:

• Promote Future Possible Selves and School Engagement

• Increase youth Self Regulation and Coping Skills
Goals of Parent Program

Uses skills training, home practice, parent-to-parent mentoring to:

• Strengthen parent-child bonds and communication
• Monitor and limit risk-taking
• Reduce negative, coercive family interactions
• Support student’s academic motivation
• Increase parental school involvement and social capital
• Promote family & cultural strengths
Goals of Family Meetings

- Parents and Teens Practice Skills Together
- Families affirm their role in school success
- Enhance family & cultural Strengths
Bridges is Culturally Adapted

Emphasize Latinx family values
Emphasize education pathways to reduce income and health disparities
THE POWER OF BRIDGES
(Evidence of Program Efficacy)

- We evaluated Bridges in a randomized trial with 516 Mexican American families.
- Families received the program in 7th grade (separate groups for Spanish vs. English).
- The control group received a two-hour, interactive parent-teen workshop.
- Core components and outcomes were evaluated at posttest and follow-up:

**Diagram:***

- Immediate Posttest
- Short and Long-Term Follow-Up

**Timeline:**
- 7th gd
- 8th gd
- 9th gd
- 12th gd
- age 20
THE POWER OF BRIDGES
(Evidence of Program Efficacy)

- Proven Benefits For Families (compared to control condition)
  - Improved family relationships in middle school
  - Strengthened parenting skills in middle school (monitoring, discipline, reinforcement)
  - Less depressive symptoms for mothers in middle school
  - Reduced parent-teen conflict in high school
  - Increased family cohesion in middle and high school
THE POWER OF BRIDGES
(Evidence of Program Efficacy)

– Proven Benefits For Teens
  • Increased coping efficacy and school engagement
  • Fewer school discipline problems in middle school
  • Higher rates of high school graduation
  • Lower rates of drug and alcohol use in middle and high school
  • Fewer substance use disorders as young adults
  • Early users benefited the most


Kids in control group were 2.5 times less likely to experience a lifetime AUD compared to those in the Bridges intervention.
POST-TEST EFFECTS ON TARGETED MEDIATORS (CORE COMPONENTS) WERE MODERATED BY LANGUAGE AND BASELINE RISK

<table>
<thead>
<tr>
<th>SPANISH LANGUAGE GROUP</th>
<th>ENGLISH LANGUAGE GROUP</th>
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<tbody>
<tr>
<td>Maternal positive reinforcement</td>
<td>Maternal positive reinforcement</td>
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<tr>
<td>(Decreased) maternal harsh parenting*</td>
<td>Maternal monitoring*</td>
</tr>
<tr>
<td>Paternal monitoring*</td>
<td>Paternal supportive parenting*</td>
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<tr>
<td>Paternal consistent discipline*</td>
<td>Family cohesion</td>
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<tr>
<td>Adolescent coping efficacy*</td>
<td></td>
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<tr>
<td>Adolescent school engagement*</td>
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* Higher risk families benefited more from the intervention

• Bridges effects on school engagement were stronger in the first year of high school (9th grade) than at posttest or one-year follow-up

• School engagement in high school mediated effects on depression/anxiety, problem substance use, and school enrollment in the senior year, and college enrollment at age 20

• Compared to control condition, Bridges was associated with marginal increase in parent-child conflict (especially between fathers and daughters) at posttest (7th grade), but a significant decrease in 9th grade parent-child that accounted for long-term effects on substance use, internalizing, and externalizing problems in 12th grade.

• Findings support power of Mediation to refine theory and identify Core Components
Barriers to Implementation

- **Barriers to broad Dissemination**
  - Cost and Feasibility to Implement
  - Number of Sessions and Family Attendance

- **Decision to Streamline**
  - Survey of Schools suggested 4 sessions
  - Parents voted with feet (average attendance was 4-5 sessions)
Core Components were used to Redesign and Streamline Delivery

• Redesigned in partnership with Title 1 schools
  – Focused on reduce number of core components identified in prior study
  – Resulted in 4 session program
  – Digitized to optimize delivery and cost
  – Eliminated home visits and school liaison

Questions:
1. Are effects maintained on targeted outcomes?
2. Did we correctly identify and preserve correct core components responsible for program impact?
BRIDGES OPTIMIZATION STUDY

Sample
• 663 7th graders and families from 3 Title 1 Middle Schools;
  – 628 female caregivers, 292 male caregivers
  – 257 (38.7%) participated with two caregivers
• Mixed ethnicity (56% Latinx, 7.8% Mixed Latinx, 12.5% non-Hispanic White, 9.7% Black, 6.8% Native American, 7.2% non-Hispanic other)

Procedures
• Recruitment through back-to-school events and school rosters
• Families randomized to 4 session Bridges or 2-hour control workshop/Blocked by Language
• Delivered in 7th grade, followed by 7th grade post-test and one-year follow-up (8th grade)
EVIDENCE THE OPTIMIZED PROGRAM WORKED

• Effects on youth outcomes at 7th grade
  – Better grades
  – Fewer externalizing problem behaviors*
  – Fewer internalizing problems (anxiety, depression)*

• Effects on youth outcomes at 8th grade
  – Fewer externalizing problem behaviors*
  – Fewer internalizing problems (anxiety, depression) *
  – Less marijuana use

* Note: Effects on these outcomes were stronger than original program
## EFFECTS ON PARENTING CORE COMPONENTS

<table>
<thead>
<tr>
<th>Parenting Outcomes 7&lt;sup&gt;th&lt;/sup&gt; grade</th>
<th>Parenting Outcomes 8&lt;sup&gt;th&lt;/sup&gt; grade</th>
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<tbody>
<tr>
<td>Improvements in maternal discipline and mindful listening</td>
<td>Improvements in maternal discipline, positive reinforcement, and monitoring</td>
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<tr>
<td>Less maternal rejection and harsh parenting</td>
<td>Less maternal harsh parenting and rejection</td>
</tr>
<tr>
<td>Improvements in paternal discipline</td>
<td>Improvements in paternal discipline and monitoring</td>
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<tr>
<td>Less paternal rejection</td>
<td>Less paternal harsh parenting</td>
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<tr>
<td>Increase in father-child conflict and harsh parenting</td>
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PRELIMINARY FINDINGS ON MEDIATORS (CORE COMPONENTS)

• Stronger effects on Parent Mediators
• Retained effects on Family Cohesion
• Effects on Teen Mediators were not retained and in opposite direction in some cases (i.e., coping efficacy)
What have we learned so far?

- Effects on some key outcomes were maintained with stronger effects at one-year posttest than original 9+ session program (i.e., marijuana use and externalizing).

- There appear to be tradeoffs associated with the streamlined program. Different pattern of effects on core components. Effects retained on parenting but not on teen components.

- These findings challenge whether we accurately prioritized Core Components that will lead to sustained effects. (Only time will tell)

- Understanding and identifying Core Components is critical to ensure program benefits are retained when adapting interventions for different delivery settings and populations.
Thanks!

• To the families, schools, and teachers that have come together to support our youth!

• To the Bridges Optimization research team (Larry Dumka, Anne Mauricio, Jenn Tein, Linda Luecken, Nancy Eisenberg, Sandy Losoya, Sara Hidalgo, Xochitil Smola, Alondra Cruz, Daisy Camacho, Joanna Kim, Vanesa Perez, Hardian Thamrin)

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