This presentation will include research. You have been warned.

Sustainability of Evidence-based Practices in Schools: Results from a Longitudinal SWPBIS Study

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Thanks and Acknowledgments

- Co-authors
- Participants in sustainability research

Handouts: http://www.apbs.org
Session Overview

1. Key variables to enhance sustainability
2. New research regarding sustainability

- Sterett Mercer
  - Comparing SWPBIS fidelity measures
- Kent McIntosh
  - Patterns of SWPBIS implementation
- Sarah Pinkelman
  - Facilitators and barriers to sustainability
  - Questions & answers after each study

Key Variables for Sustainability of SWPBIS at Tier 1

State
  - State Leadership Teams
  - Centralized Training Systems
  - Standardized Training Curriculum
  - Blueprint Self-assessment

District
  - District Training Systems
  - District Coaching Systems
  - Communities of Practice
  - Maintain Model Sites for Visits

School
  - Effective and Efficient Teaming
  - Data Collection and Use
  - Sharing Data with Whole Staff
  - Classroom PBIS Systems

Hume & McIntosh (2013), McIntosh et al. (2013), McIntosh et al. (2015), Childs et al. (2015), Mathews et al. (2014), McIntosh et al. (2016), McIntosh et al. (in press)

Schools using SWPBIS
August, 2015

- 21,278
Measures to assess SWPBIS fidelity of implementation at Tier I

- Team Implementation Checklist (TIC)
- PBIS Self-Assessment Survey (SAS)
- School-wide Evaluation Tool (SET)
- School-wide Benchmarks of Quality (BoQ)
- SWPBIS Tiered Fidelity Inventory (TFI)

Available at:  http://pbisapps.org

Comparability of Fidelity Measures for Assessing Tier 1 SWPBIS


The Study

- Sample
  - Schools with measures submitted via PBIS Assessment (www.pbisapps.org)
    - Completed within 30 days of each other

- Research Questions
  1. How different are the mean scores?
  2. How related are the obtained scores?
  3. How comparable are the criterion scores?

Are these tools all measuring the same thing?

Model $\chi^2 = 59.09$
Turri et al. (in press)
Mean Differences and Correlations

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cutoff</th>
<th>Measure 2</th>
<th>Mean 1 n</th>
<th>Mean 1</th>
<th>Mean 2 n</th>
<th>Diff.</th>
<th>r</th>
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<tr>
<td>TFI SET</td>
<td>36</td>
<td>BOQ</td>
<td>62.03</td>
<td>73.89</td>
<td>-11.86***</td>
<td>.92***</td>
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<td>BOQ</td>
<td>200</td>
<td>SAS</td>
<td>85.39</td>
<td>84.83</td>
<td>0.57</td>
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<tr>
<td>SAS</td>
<td>613</td>
<td>TIC</td>
<td>80.70</td>
<td>79.66</td>
<td>1.04</td>
<td>.70***</td>
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<tr>
<td>TIC</td>
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<td></td>
<td>77.03</td>
<td>75.87</td>
<td>1.16</td>
<td>.96***</td>
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</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cutoff</th>
<th>Measure 2</th>
<th>Mean 1 n</th>
<th>Mean 1</th>
<th>Mean 2 n</th>
<th>Diff.</th>
<th>r</th>
</tr>
</thead>
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<td>SET BOQ</td>
<td>1,103</td>
<td>SAS</td>
<td>89.34</td>
<td>79.60</td>
<td>9.74***</td>
<td>.63***</td>
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<td>SAS</td>
<td>2,055</td>
<td>TIC</td>
<td>87.23</td>
<td>77.08</td>
<td>10.15***</td>
<td>.65***</td>
<td></td>
</tr>
<tr>
<td>TIC</td>
<td>1,269</td>
<td></td>
<td>86.53</td>
<td>78.58</td>
<td>7.95***</td>
<td>.59***</td>
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<tr>
<td>BOQ SAS</td>
<td>3,705</td>
<td>TIC</td>
<td>81.17</td>
<td>79.20</td>
<td>1.97***</td>
<td>.68***</td>
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</tr>
<tr>
<td>TIC</td>
<td>1,553</td>
<td></td>
<td>78.45</td>
<td>80.54</td>
<td>2.10***</td>
<td>.71***</td>
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</tr>
<tr>
<td>SAS TIC</td>
<td>3,706</td>
<td>TIC</td>
<td>73.36</td>
<td>74.02</td>
<td>-0.63**</td>
<td>.67***</td>
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</table>

Mean differences were negligible to small except for SET.

Higher scores more likely on SET.

Concurrent validity estimates were moderate to high ($r_s = .59$ to $.92$).

SAS least affected by score ceilings.

**Findings**

- Mean differences were negligible to small except for SET.
- Higher scores more likely on SET.
- Concurrent validity estimates were moderate to high ($r_s = .59$ to $.92$).
- SAS least affected by score ceilings.
Implications

- All of these Tier I fidelity measures are strongly related to each other
- TFI scores strongly related to scores on BoQ, SAS, and TIC
- The SET has a strong ceiling effect
- The SAS was the “hardest” measure for assessing high-fidelity implementation

Patterns of SWPBIS Implementation


Research Questions

1. Are there groups of schools with similar patterns of fidelity over 5 years of SWPBIS implementation?
2. What school and district variables predict classification in these groups?

Method

- Sample
  - 5,331 schools trained in SWPBIS across 5 yrs
- Measures
  - SWPBIS Tier I Fidelity Measures
    - Likelihood of implementation at criterion
  - School characteristics
    - Enrollment, grade levels, locale
  - District characteristics
    - Size, % schools implementing, % schools in cohort
Analysis

- Latent class analysis
to classify schools based on their likelihood of implementing SWPBIS with fidelity each year
- Predictive analyses
to assess which school and district predictors predicted class membership

Results

- Four latent classes
- Schools in districts with (a) more schools implementing and (b) larger implementation cohorts were more likely to be Sustainers. High schools and smaller schools were more likely to be Abandoners.
Perceived Enablers and Barriers to the Sustainability of School-wide Positive Behavioral Interventions and Supports

Association for Positive Behavior Support Convention
March 25, 2016

Sarah E. Pinkelman, Ph.D., BCBA-D
George Mason University (current)
Utah State University (Fall 2016)

Purpose

- Replicate and extend McIntosh et al. (2014) with larger and more diverse sample
- Identify perceived enablers and barriers to SWPBIS sustainability
- Current sample included more schools in early stages of implementation
  - 25% of schools in year 0 or 1 in current study
  - 9% in McIntosh et al. (2014)
Research Questions

• What are perceived as the most important **enablers** for sustaining SWPBIS?

• What are perceived as the most significant **barriers** to sustaining SWPBIS?

Participants

• 860 educators

• Knowledge of SWPBIS systems in their schools
  • 61% PBIS team leader/facilitator/internal coach
  • 24% school administrator
  • 9% PBIS team member
  • 5% district/external coach

Schools

• Schools
  • 68% elementary
  • 20% middle schools
  • 12% high schools

• SWPBIS implementation
  • 25% in year 0-1
  • 48% in year 2-4
  • 28% 5 + years

• Urbanicity
  • 33% suburban
  • 28% urban
  • 24% rural
  • 14% towns

Measure

• School-wide Universal Behavior Sustainability Index: School Teams (SUBSIST; McIntosh et al., 2009)

• Two open ended questions were the focus of this study
  1. What is the most important factor for sustaining SWPBIS?
  2. What is the most significant barrier to sustaining SWPBIS?
Procedure

- Participants recruited through state SWPBIS coordinators
  - Schools beginning implementation or at increased risk for abandonment were specifically targeted
- Participants completed SUBSIST during the first year of a longitudinal study

Design & Analyses

- Qualitative approach to analyze responses
  - What is the most important factor for sustaining SWPBIS?
  - What is the most significant barrier to sustaining SWPBIS?
- Open coding process (Patton, 2002)
  1. Identify patterns/themes in participant responses
  2. Drafted theme definitions and continually revised while sorting through data
  3. Iterative process continued until all responses coded with one theme
     - 1,256 enabler units, 1,029 barrier units
     - 13 themes
  4. ICA for 20% of responses; 98% ICA after consensus

What Would you Predict?

“What is the most important factor for sustaining SWPBIS?”

Enablers

“What Is the Most Important Factor for Sustaining SWPBIS?”

<table>
<thead>
<tr>
<th>Factor</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Buy-in</td>
<td>250</td>
</tr>
<tr>
<td>Consistency</td>
<td>200</td>
</tr>
<tr>
<td>Training</td>
<td>150</td>
</tr>
<tr>
<td>Teaching</td>
<td>100</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>75</td>
</tr>
<tr>
<td>SW-PBS Philosophy</td>
<td>50</td>
</tr>
<tr>
<td>Data</td>
<td>25</td>
</tr>
<tr>
<td>Fidelity of Resources</td>
<td>10</td>
</tr>
<tr>
<td>Resources: Time</td>
<td>5</td>
</tr>
<tr>
<td>Resources: Money</td>
<td>1</td>
</tr>
</tbody>
</table>
Enablers: Staff Buy-in
• n = 214; most frequent
• Commitment of teachers and staff in supporting SWPBIS
• Does not include buy-in from school administrators or other stakeholders

“I think that the most important factor for sustaining PBIS is to have teacher and staff buy-in for the initiative.”

Enablers: School Administrator Support
• n = 197; second most frequent
• Active support of building-level administration (principals or vice principals)
• Support from school (not district) administrators

“Administrative support is the most crucial part if PBIS will be effective. Without it, no matter how hard the team will try to change things, it will not work.”

Enablers: Consistency
• n = 118; third most frequent
• Common approach among staff, personnel, teams
• Consistency pertaining to implementation, common language, working toward common goal

“Consistency across all grade levels that is given by teachers, administrators, and support staff. The same message and strategies need to be consistently demonstrated in order to promote growth and sustainability.”

Additional Enablers
• Training (n = 116)
• Teaming (n = 96)
• Effectiveness (n = 83)
• PBIS Philosophy (n = 81)
• Data (n = 61)
• Fidelity of Implementation (n = 48)
• Resources: Time (n = 38)
• Resources: Money (n = 38)
What Would you Predict?

“What is the most significant barrier to sustaining SWPBIS?”

Barriers: Staff Buy-in

- $n = 163$; most frequent
- Most frequent enabler and barrier!

“The biggest barrier for our school has been getting staff to buy in initially. I think once they have gotten on board, they are willing. It is the initial step.”

Barriers: Resources - Time

- $n = 160$; second most frequent
- Time needed to carry out activities related to SWPBIS (planning, meeting, data review, completing fidelity measures)

“...As far as time for prep with SWPBIS...preparation of lessons...preparation of materials/photos for display in hallways...having enough time...seems to be the most significant barrier.”

“Time! More time is needed to be able to meet as a team, share data with staff, do problem-solving, train new staff, train para-educators, conduct fidelity and other implementation measures.”
**Barriers: Resources - Money**

- $n = 115$; third most frequent
- Monetary resources needed to implement SWPBIS
- Many one-word responses, such as “funding” or “money”

“Funding for the school-wide initiative is difficult to come across. The state gives us less than $200$ a year to help us implement the school-wide program. Our school administration funds the rest of the rewards, incentives, and materials necessary to keep our program operational.”

**Additional Barriers**

- Consistency ($n = 66$)
- Integrating other Initiatives ($n = 57$)
- Training ($n = 57$)
- Fidelity of Implementation ($n = 51$)
- Student Buy-in ($n = 50$)
- PBIS Philosophy ($n = 43$)
- School Administrator Support ($n = 42$)

**Staff Buy-in**

- Most frequent enabler and barrier
- Identified in previous research (Forman et al., 2009; Langley et al., 2010)
  - Second barrier in McIntosh et al. (2014)
- Staff many need to experience outcomes of practice to become supportive (Andreou et al., 2015)
- In current study, if staff hadn’t yet experienced outcomes, buy-in may have been minimal

**Strategies to Promote Buy-in**

- Staff buy-in is so important!
- Activities to improve staff buy-in have been proposed in the literature (Feuerborn, Wallace, & Tyre, 2013)
- Differentiate strategies before vs. during implementation
Strategies to Promote Buy-in Before Implementation

- Include staff in discussions during exploration
- Assess staff concerns and tailor the practice to their needs (Hall & Hord, 2006)
- *Self-Assessment and Program Review for Programs for Positive Behavior Interventions and Supports* (SAPR-PBIS; Walker & Cheney, 2012)
  - Assess staff concerns and develop a tailored implementation approach

Strategies to Promote Buy-in During Implementation

- Staff reinforcement systems
  - Until naturally occurring reinforcers are present
  - Public acknowledgement or drawings
- Improve saliency of early outcomes
  - So results are more clear
  - E.g., graphs showing level of implementation and student outcomes
- Ensure high treatment fidelity
  - If low fidelity, unlikely staff will experience reinforcing consequences for implementation

Promoting Buy-in for New Staff

- Important for new staff
  - Implementing but haven’t contacted reinforcement
  - Implementation behavior won’t sustain if not reinforced
  - New teachers less likely to implement additional practices because of standard responsibilities to which they are becoming accustomed (Baker et al., 2004)

Administrator Support

- Second most frequent enabler
  - Aligns with previous research
  - Most common theme in McIntosh et al. (2014)
  - Lack of administrator support has been identified as a predictor of abandonment (Nese et al., 2015)
Strategies to Improve Admin Support

• Recent articles provide guidance on cultivating support from school admin (McIntosh, Kelm, & Canizal Delabra, 2015; Strickland-Cohen, McIntosh, & Horner, 2014)
• School admin support is related to
  • Degree to which the individual supports SWPBIS
  • District support for SWPBIS
• District can enhance building-level admin support
  • Institutionalizing SWPBIS into hiring process
  • Provide training to new admin (Fixsen et al., 2005)

Resources

• Previous research identified a lack of resources to be significant barrier to implementation (see Forman et al., 2009; Kincaid et al., 2007; Massatti et al., 2008; McIntosh et al., 2014; Sanford DeRousie & Bierman, 2012; Seffrin et al., 2009; Tyre et al., 2010)
• Similar results in this study
  • Time and money separated
  • 2nd and 3rd most frequent barriers

Future Research

• Enablers and barriers should be experimentally evaluated
• Training was the 5th most frequent theme in terms of total responses
  • Likely important variable to consider
  • Research has identified effective methods for staff training and coaching
  • Specific activities in each component and how they affect sustainability have yet to be determined

Limitations

• Responses may not be generalizable to the larger population
  • 860 participants is relatively small compared to the number of schools implementing SWPBIS
• Findings specific to SWBPIS and not larger construct of sustainability
• Qualitative nature of the study
  • Participant responses are prone to bias
  • Non experimental; enablers and barriers should be experimentally evaluated
In summary

• With an improved understanding of sustainability
  • Schools can be better informed on how to increase the sustained use of EBP
  • Resulting in improved student outcomes

Thank you!

SAVE THE DATE

October 27-28, 2016

PBIS: Systems for Enhancing Climate & Culture

Donald Stephens Convention Center
Rosemont, IL

This two-day forum for school, state, district and regional Leadership Teams and other professionals has been designed to increase the effectiveness of PBIS implementation.

Sessions are organized by strands that support initial through advanced implementation in elementary, middle, and high schools as well as juvenile justice facilities:

- PBIS Foundations
- Classroom Applications
- Tier 2 Systems & Practices
- Tier 3 Systems & Practices
- Aligning Systems
- Juvenile Justice
- Mental Health Integration
- Equity
- Applied Evaluation
- Special Topics

Visit the Upcoming Events page at www.pbis.org for more

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Handouts: http://kentmcintosh.wordpress.com
Selected References


