Innovations in Internalizing: Advances in Screening and Early Identification Practices

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Background: Students’ Emotional-Behavioral Health
I’ve been waiting…

• **ESSA** Emphasizes children's mental health in the schools- title 1 finds for MTSS, funds for safe/health schools

• The New York State Council of School Superintendents statewide survey of its members *Children's' mental health/emotional well-being #1 priority* (the daily star.com)

• MTSS taking root Nationally

• McDougal’s story (1998)
Why are we doing this?
We have lots of Children

**Children**- 2010, there were **74.2** million children 17 or under in the US (26 % of the population).

- **54 %** were white, non-Hispanic;
- **23 %** Hispanic,
- **14 %** African-American,
- **4 %** Asian-Pacific, and
- **5%** all others
Prevalence & Progression:

Behavioral health needs

- 21% experienced symptoms of a DSM disorder during the course of a year.
- 11% experienced significant impairment
- 5% experienced extreme functional impairment.
- 75 to 90% of students in need of services do not receive them.

Progression of disorders is stable and very predictable
- Externalizing behaviors - tantrums, ODD, CD
- Internalizing difficulties - anxiety, depression, suicide
- Cognitive/attention problems - focus, attention, concentration, diminished learning

And lots of Children with behavioral health Needs
Youth Risk Behavior Surveillance System (YRBSS) conducted by the CDC

- The YRBSS is a national survey, conducted by CDC, provides data representative of 9th through 12th grade students in public and private schools in the United States.
- Developed in 1990 to monitor health behaviors that contribute markedly to the leading causes of death, disability, and social problems.
- Surveys are conducted every two years, usually during the spring semester.
- From 1991 through 2017, the YRBSS has collected data from more than 4.4 million high school students in more than 1,900 separate surveys.
- Available at: https://www.cdc.gov/healthyyouth/data/yrbs/overview.htm
2017 Youth Risk Behavior Survey:
SURVEY SAYS…..

Overall High school students report:

• 19.0% had been bullied on school property
• 31% report persistent feelings of hopelessness
• 17% considered suicide
• 14% developed a suicide plan
• 7.4% had attempted suicide
Internalizing/affect problems
Negative Long Term Outcomes

- Negative affect can significantly diminish social functioning, student well being, grades, attendance, and later life outcomes (employment, relationships)
- Difficulties include anxiety, depression, compulsive/negative thoughts
- This can lead to the ultimate tragedy

- Students with internalizing difficulties are generally under identified and not referred for support
- Teacher referral and/or nomination procedures still under identify.
- Universal screening procedures dramatically improve identification rates to intervene with students who are suffering.
Suicide

• Nearly 30,000 Americans commit suicide every year.

• In the U.S., suicide rates are highest during the spring.

• Suicide is the 3rd leading cause of death for 15 to 24-year-olds and 2nd for 24 to 35-year-olds.

• On average, 1 person commits suicide every 16.2 minutes.

• Each suicide intimately affects at least 6 other people.
Summary: Common Behavioral Health Concerns

Externalizing

- Irritable, ODD, BD, CD, ASPD
- Comorbid/Co-occurring ADHD, LD, thought disorders, and learning problems
- Also significant number with internalizing problems

Internalizing: Our Focus Today

- Anxiety, OCD and Depressive disorders all have an increased risk for suicide...
- Comorbid with social, learning, and adaptive problems.

Cognitive/Attention

also related to problems in learning, conduct, and social skills
Change....

But what do we do?
Early Identification & Intervention

- Progression of disorders is predictable
- Early identification & intervention with children at risk for emotional behavior disorders appear to be the “most powerful course of action for ameliorating life-long problems associated with children at risk for EBD” (Hester et al., 2004)
- Younger children are more likely to be responsive and maintain positive outcomes from early prevention/intervention programs (Bailey, Aytch, Odom, Symons, & Wolery 1999)
School Teachers Can Improve Students' Mental Health, Study Finds

• examined 43 studies that evaluated nearly 50,000 students who had received school-based mental health services
• Mental health interventions that were integrated into the regular curriculum were the most effective.

The Effectiveness of School-Based Mental Health Services for Elementary-Aged Children: A Meta-Analysis
Amanda L. Sanchez, MS, Danielle Cornacchio, MS, Bridget Poznanski, BS, Alejandra M. Golik, BA, Tommy Chou, MS, Jonathan S. Comer, PhD

The evolution of 3 tiered models of support

Q: What is the foundation for all effective tiered systems of support?
Think about the Evolution

• RTI: high rates of illiteracy, outcomes of LD students were poor.
• Lack of screening, intervention, and PM hampered efforts
• The Foundation for RTI: CBM research-screening, informed interventions and PM
• MTSS: similar levels-students at risk and very poor outcomes
• Current lack of screening and PM inhibits effective intervention
• MTSS- UA and PM is the foundation for improved practices
RtI and Behavior
Need for Universal Behavior Screening

• Schools **ARE** the ideal setting Screening (Wu et al., 1999).

• Early identification and intervention appear to be the **most powerful course of Intervention** for ameliorating life-long problems associated with children at risk for EBD” (Hester et al., 2004)

• Yet Behavioral Health Screening occurs in about **3-5%** of districts across the country.
How have schools been identifying students...

- Office discipline referrals/ suspensions
- Attendance
- Course Grades

So...what is the issue?

- Poor reliability
- Subjective
- Ineffective for identifying students with internalizing/ social difficulties
Selecting a Universal Screening Measure: Technical Adequacy Considerations

**Norms-utility**
- sample populations based on census data, *includes clinical and typical samples*

**Reliability-accuracy**
- Internal consistency
- Test retest
- Inter-scorer

**Validity-meaningful, screening ability**
- Content
- Concurrent
- Predictive-Screening Accuracy: *can’t have this without clinical and typical samples*
Response to Intervention and School-wide Positive Behavior Support

- Horner; Q & A Document.

- **For Universal Screening** we use the SSBD for elementary schools (see work of Lucille Eber in Illinois), but basically rely on ODRs and teacher reports at middle and high school. **If 2–3 times a year your teachers nominate students who engage in behavior that is a barrier to their social and/or academic achievement you will identify most kids needing early support.**

- But is this really the case?
Systematic Screening for Behavior Disorders (SSBD) - Walker, Stevenson, & Feil, 2014

● Validated by the Program Effectiveness Panel of the U.S. Department of Education
● Now a two-stage, gated screening system
● Commonly referred to as the “gold standard”
● Evaluates student behavior on two dimensions:
  ○ Externalizing Behaviors
  ○ Internalizing Behaviors
● Originally intended for elementary-aged students
● Second edition added Pre-K and middle school screening
SSBD Stage 1

- Stage 1: Nomination Procedure
  - Teachers are given description of internalizing and externalizing behavior patterns
  - Teacher lists 10 students from class who they believe best exhibits internalizing or externalizing behavior(s)
  - Teacher rank-orders students from “most like” to “least like”
  - Teacher completes two lists, one for internalizing and one for externalizing behaviors
  - The 6 highest ranked students, 3 from each list, pass through Gate 1 into Stage 2

Rank Ordering on Externalizing Dimension

**Externalizing** refers to all behavior problems that are directed outwardly, by the child, toward the external social environment. Externalizing behavior problems usually involve behavioral excesses, (i.e., too much behavior) and are considered inappropriate by teachers and other school personnel. **Nonexamples** of externalizing behavior problems would include all forms of adaptive child behavior that are considered appropriate to the school setting.

**Examples include:**
- Displaying aggression toward objects or persons
- Arguing
- Fleeing the presentation of others
- Defying the teacher
- Being out of seat
- Not complying with teacher instructions or directions
- Having tantrums
- Being hyperactive
- Disturbing others
- Stealing
- Not following teacher or school imposed rules

**Nonexamples include:**
- Cooperating, sharing
- Working on assigned tasks
- Making assistance needs known in an appropriate manner
- Listening to the teacher
- Interacting in an appropriate manner with peers
- Following directions
- Attending to task
- Complying with teacher requests
- Cooperating, sharing

**Instructions:**
1. Review the definition of externalizing behavior and then review a list of all students in your class.
2. In Column One, enter the names of the three students who characteristic behavior patterns most closely match the externalizing behavioral definition.
3. In Column Two, rank order the students listed in Column One according to the degree or extent to which each exhibits externalizing behavior to the greatest is ranked first and so on until all three students are rank ordered.

<table>
<thead>
<tr>
<th>COLUMN ONE</th>
<th>COLUMN TWO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List Externalizers</strong></td>
<td><strong>Rank Order Externalizers</strong></td>
</tr>
<tr>
<td>Student Names*</td>
<td>Student Names*</td>
</tr>
</tbody>
</table>
SSBD Stage 2

- Stage 2: Teacher Ratings
  - Teachers complete the Critical Events Index (CEI) and the Combined Frequency Index (CFI) for the 6 students
- CEI is a checklist of 33 high-intensity, low-frequency behaviors
  - Teachers record any listed behavior within last 6 months
  - Teachers have option of writing in two serious behaviors not listed
Yet “teacher nomination” procedures have increasingly been critiqued as a UA technique

- Teachers often under-refer for internalizing

Multiple Gating/Teacher Nomination: same problem

- findings suggest teachers can identify approximately half of children who experience at-risk levels of depression and anxiety (40-50%)
- substantial miss rates call into question this method for use as either an alternative to universal screenings or as an initial step (gatekeeper role) in a multi-modal identification process.
Limited research using teacher identification to identify internalizing students

Accuracy of Teachers in Identifying Elementary School Students Who Report At-Risk Levels of Anxiety and Depression (Cunningham & Suldo, 2014)

- 200+ elementary aged students, rated themselves using the CDI & MASC
- Teachers nominated three students from class lists

<table>
<thead>
<tr>
<th></th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Positive Predictive Value</th>
<th>Negative Predictive Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>50%</td>
<td>83.8%</td>
<td>23.9%</td>
<td>94.3%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>40.7%</td>
<td>82.5%</td>
<td>22.9%</td>
<td>91.6%</td>
</tr>
</tbody>
</table>
Early identification of students who might develop emotional and behavioral disorders (EBD) is essential in preventing negative outcomes. Systematic screening tools are available for identifying elementary-age students with EBD, including the Systematic Screening for Behavior Disorders (SSBD) and the Student Risk Screening Scale (SRSS). The SSBD is considered the gold standard for systematic EBD screening. The brevity of the SRSS is often favored with respect to resource allocation. The authors evaluated the concurrent validity of the SRSS to predict SSBD results when used to detect school children with externalizing or internalizing behavior concerns. Between low- and high-risk categories, the SRSS had excellent accuracy for predicting both externalizing (95%) and internalizing (93%) problems on the SSBD. Sensitivity (94%) and specificity (95%) were both excellent for externalizing behavior, but for internalizing behavior, sensitivity was lower (44%), while specificity was excellent (95%). Receiver-operating characteristic analysis also suggested that the SRSS was more accurate for detecting externalizing than internalizing behaviors. Limitations and future directions are offered.
# A Comparison of Systematic Screening Tools for Emotional and Behavioral Disorders

Lane, et al.

## Table 3
**Conditional Probabilities, κ Agreement, and ROC Areas for Brief SRSS Predicting the “Gold Standard” SSBD**

<table>
<thead>
<tr>
<th>Target</th>
<th>SRSS Comparison</th>
<th>PPP</th>
<th>NPP</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Accuracy</th>
<th>Prevalence</th>
<th>k</th>
<th>ASE</th>
<th>95% CI</th>
<th>(AUC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Externalizing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low × High</td>
<td></td>
<td>60.42%</td>
<td>99.46%</td>
<td>93.55%</td>
<td>95.09%</td>
<td>94.74%</td>
<td>7.42%</td>
<td>.7078</td>
<td>.0597</td>
<td>.5908 to .8249</td>
<td>.952*</td>
</tr>
<tr>
<td>Low × Moderate</td>
<td></td>
<td>7.83%</td>
<td>99.46%</td>
<td>81.82%</td>
<td>77.64%</td>
<td>77.73%</td>
<td>2.27%</td>
<td>.1058</td>
<td>.0357</td>
<td>.0359 to .1757</td>
<td>.802*</td>
</tr>
<tr>
<td>Low × Moderate + High</td>
<td></td>
<td>23.31%</td>
<td>99.46%</td>
<td>95.00%</td>
<td>74.65%</td>
<td>76.17%</td>
<td>7.50%</td>
<td>.2887</td>
<td>.0394</td>
<td>.2114 to .3659</td>
<td></td>
</tr>
<tr>
<td><strong>Internalizing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low × High</td>
<td></td>
<td>29.63%</td>
<td>97.35%</td>
<td>44.44%</td>
<td>95.09%</td>
<td>92.84%</td>
<td>4.44%</td>
<td>.3192</td>
<td>.0943</td>
<td>.1345 to .5040</td>
<td></td>
</tr>
<tr>
<td>Low × Moderate</td>
<td></td>
<td>9.40%</td>
<td>97.35%</td>
<td>52.38%</td>
<td>77.64%</td>
<td>76.57%</td>
<td>4.24%</td>
<td>.0943</td>
<td>.0386</td>
<td>.0186 to .1699</td>
<td></td>
</tr>
<tr>
<td>Low × Moderate + High</td>
<td></td>
<td>13.19%</td>
<td>97.35%</td>
<td>65.52%</td>
<td>74.65%</td>
<td>74.14%</td>
<td>5.56%</td>
<td>.1401</td>
<td>.0379</td>
<td>.0658 to .2145</td>
<td></td>
</tr>
</tbody>
</table>

Note: ROC = receiver-operating characteristic; SRSS = Student Risk Screening Scale; SSBD = Systematic Screening for Behavior Disorders; PPP = positive predictive power; NPP = negative predictive power; ASE = asymmetric standard error; CI = confidence interval.

Tests of significance from logistic regression: *p < .0001, treating SRSS scores continuously.
### Table 5
Correlations Between Systematic Screening for Behavior Disorders Stage Two and Other Teacher Rating Scales, ODR, and GPA

<table>
<thead>
<tr>
<th></th>
<th>ASEBA TRF Int.</th>
<th>ASEBA TRF Ext.</th>
<th>SSRS Int.</th>
<th>SSRS Ext.</th>
<th>GPA</th>
<th>ODR Dis.</th>
<th>ODR Att.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Events Internalizing</td>
<td>0.38</td>
<td>-0.11</td>
<td>0.44</td>
<td>-0.17</td>
<td>0.17</td>
<td>-0.36</td>
<td>0.05</td>
</tr>
<tr>
<td>Critical Events Externalizing</td>
<td>0.10</td>
<td>0.41</td>
<td>-0.07</td>
<td>0.43</td>
<td>-0.30</td>
<td>0.31</td>
<td>-0.11</td>
</tr>
<tr>
<td>Adaptive</td>
<td>-0.28</td>
<td>-0.37</td>
<td>-0.16</td>
<td>-0.33</td>
<td>0.39</td>
<td>-0.38</td>
<td>-0.12</td>
</tr>
<tr>
<td>Maladaptive</td>
<td>0.03</td>
<td>0.21</td>
<td>-0.12</td>
<td>0.25</td>
<td>-0.20</td>
<td>0.28</td>
<td>-0.10</td>
</tr>
</tbody>
</table>

**Notes.** N(ASEBA, SSRS) = 59; N(GPA, ODR) = 66. ODR = office disciplinary referrals; ODR dis. = disorderly conduct; ODR att. = attendance office disciplinary referrals; GPA = grade point average.
Development of the **New Gold Standard**

- The new gold standard will need
  - New/different model for test development
  - CBM like characteristics

Dr. Scott Meier- The “Edison” of change sensitivity

- Meier (1997, 1998) developed Intervention Item Selection Rules (IISRs) designed to identify intervention-sensitive items.
- He considered test items as differing along a trait-state continuum, and
- So different test construction procedures are necessary to select items sensitive to results of psychosocial interventions.
- Intervention-sensitive items should change in response to an intervention and remain stable over time when no intervention is present.
Meier on change sensitivity

- Creating change sensitive measures
- Intervention Item Selection Rules
- Now you get the “Edison” thing
Meier: Progress Monitoring and Outcome Assessment

- Examine student performance frequently, over time, to evaluate response to instruction and intervention (RtI2).
- Produces clinical data for feedback about client progress during intervention.
- Also used for outcome assessment, produces data about the amount and type of change from the start to the end of therapy (Meier, 2014).
Feedback Improves Outcomes

- When used appropriately, the primary benefit of PM measures is the feedback they provide about clinical progress.

- More specifically, research has documented that PM measures can identify child and adolescent clients who are failing to improve or worsening, allowing clinicians to reconsider the provided interventions in the light of possible treatment failure.
MTSS Measures: Important Considerations

**Important Questions:**
- Does the measure assess strengths and risk?
- Can it inform intervention design (consider the scales included)?
- Is it useful for Screening and Progress Monitoring (consider how the test was developed- traditional vs. change sensitive)?
- Is it useful for evaluation- can it be used to assess interventions in tiers 1-3, across ages, settings, raters, and programs?
- Most importantly- is it technically adequate for UA and PM? See Psychometric Slide earlier.
Response to Intervention and School-wide Positive Behavior Support

• Horner; Q & A Document.
• **For Universal Screening** we use the SSBD for elementary schools (see work of Lucille Eber in Illinois), but basically rely on ODRs and teacher reports at middle and high school. If 2–3 times a year your teachers nominate students who engage in behavior that is a barrier to their social and/or academic achievement you will identify most kids needing early support.
• But is this really the case?
INTRODUCING THE

www.BIMAS2.com

By James L. McDougal, Psy. D., Achilles N. Bardos, Ph.D., & Scott T. Meier, Ph.D.
Three authors coming together from three different perspectives

James L. McDougal

Achilles N. Bardos

Scott T. Meier
The BIMAS is a multi-informant web-based delivered assessment system

- RATINGS available for:
  - Parents
  - Teacher
  - Self (12-18 yrs old)
  - Clinician

- Grades pre-K to 12
- Secure server platform
- Reports tailored to MTSS tiers
- Assessment results are immediately available
BIMAS (standard) OVERVIEW

BEHAVIORAL CONCERN SCALES
- Conduct
  - anger management problems, bullying behaviors, substance abuse, deviance
- Negative Affect
  - anxiety, depression
- Cognitive/Attention
  - attention, focus, memory, planning, organization

ADAPTIVE SCALES
- Social
  - social functioning, friendship maintenance, communication
- Academic Functioning
  - academic performance, attendance, ability to follow directions
### Bimas overview

<table>
<thead>
<tr>
<th>BIMAS Scales</th>
<th>T-score</th>
<th>Scale Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavioral Concern Scales</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$T = 70+$</td>
<td>High Risk</td>
</tr>
<tr>
<td></td>
<td>$T = 60-69$</td>
<td>Some Risk</td>
</tr>
<tr>
<td></td>
<td>$T = 60$ or less</td>
<td>Low Risk</td>
</tr>
<tr>
<td><strong>Adaptive Scales</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$T = 40$ or less</td>
<td>Concern</td>
</tr>
<tr>
<td></td>
<td>$T = 41-59$</td>
<td>Typical</td>
</tr>
<tr>
<td></td>
<td>$T = 60+$</td>
<td>Strength</td>
</tr>
</tbody>
</table>
BIMAS-2 (standard)

- 34 items
- Assesses behavioral concerns and adaptive functioning.
- Multiple Raters
- Normed for screening, shown to be change sensitive for PM
- On-line/ sever based
- Variety of reports across tiers for use by MTSS
Large Normative Sample

Total Sample
$N = 4,855$

Teacher
$N = 1,938$
Normative
$N = 1,400$
Clinical
$N = 538$

Parent
$N = 1,938$
Normative
$N = 1,400$
Clinical
$N = 467$

Self-Report
$N = 1,050$
Normative
$N = 700$
Clinical
$N = 350$
Classification Accuracy of BIMAS–Teacher Scales

<table>
<thead>
<tr>
<th>Classification Accuracy Statistic</th>
<th>Full Range of Scores</th>
<th>Cut-Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Correct Classification</td>
<td>85.2%</td>
<td>82.5%</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>83.5%</td>
<td>80.1%</td>
</tr>
<tr>
<td>Specificity</td>
<td>85.8%</td>
<td>83.4%</td>
</tr>
<tr>
<td>Positive Predictive Power</td>
<td>68.4%</td>
<td>64.9%</td>
</tr>
<tr>
<td>Negative Predictive Power</td>
<td>93.4%</td>
<td>91.6%</td>
</tr>
</tbody>
</table>
SO how does the BIMAS2 compare to the "Gold Standard?"

• Pilot studies in the schools
• Compared BIMAS2 Ratings and SSBD nominations
• BIMAS2 used as the criterion measure because it is normed and has known classification stats.
Replication Study: SSBD and BIMAS2

- 2 Elementary Schools
- Suburban District, predominately Caucasian
- Grades K-5
- 45 teachers
- Total student n= 1012

What we asked teachers to do:
modified SSBD Gate 1

Step 1: Teachers completed the BIMAS-2 standard form on their entire class

Step 2: Teachers were provided a class list, given a definition for externalizing behavior and internalizing behavior, and then asked to identify three students (SSBD) in each category.

Step 3: Teachers were asked to rank order the top three students
Results - Comparison of BIMAS2 and SSBD Identifications

Externalizing Composite: Yellow level students

<table>
<thead>
<tr>
<th>&quot;At-risk&quot; Students</th>
<th>BIMAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIMAS T score 60-69</td>
<td></td>
</tr>
<tr>
<td><strong>SSBD</strong></td>
<td>At-risk</td>
</tr>
<tr>
<td>At-risk</td>
<td>77</td>
</tr>
<tr>
<td>Not at-risk</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
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</tbody>
</table>
Results- Comparison of BIMAS2 and SSBD Identifications

Externalizing Composite: Red level students

<table>
<thead>
<tr>
<th>“High Risk” Students</th>
<th>BIMAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At-risk</td>
</tr>
<tr>
<td>SSBD</td>
<td></td>
</tr>
<tr>
<td>At-risk</td>
<td>32</td>
</tr>
<tr>
<td>Not at-risk</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
</tr>
</tbody>
</table>
## Results - Comparison of BIMAS2 and SSBD Identifications

### Internalizing Composite: Yellow level students

<table>
<thead>
<tr>
<th></th>
<th>BIMAS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>At-risk</td>
<td>Not at-risk</td>
<td>Total</td>
</tr>
<tr>
<td><strong>SSBD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At-risk</td>
<td>59</td>
<td>68</td>
<td></td>
<td>127</td>
</tr>
<tr>
<td>Not at-risk</td>
<td>114</td>
<td>771</td>
<td></td>
<td>885</td>
</tr>
<tr>
<td>Total</td>
<td>173</td>
<td>839</td>
<td></td>
<td>1012</td>
</tr>
</tbody>
</table>

"At-risk" Students
BIMAS T score 60-69
Results - Comparison of BIMAS2 and SSBD Identifications

Internalizing Composite: Red level students

<table>
<thead>
<tr>
<th>&quot;High Risk&quot; Students</th>
<th>BIMAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At-risk</td>
</tr>
<tr>
<td>SSBD</td>
<td></td>
</tr>
<tr>
<td>At-risk</td>
<td>20</td>
</tr>
<tr>
<td>Not at-risk</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>
Comparison of BIMAS2 and SSBD Identifications

Classification Stats for the SSBD using BIMAS2 as the Criterion measure

<table>
<thead>
<tr>
<th>Externalizing</th>
<th>&quot;At-Risk&quot;</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>.56</td>
<td>.86</td>
</tr>
<tr>
<td>Specificity</td>
<td>.94</td>
<td>.90</td>
</tr>
<tr>
<td>Efficiency</td>
<td>89%</td>
<td>90%</td>
</tr>
<tr>
<td>Positive Predictive Power</td>
<td>59%</td>
<td>25%</td>
</tr>
<tr>
<td>Negative Predictive Power</td>
<td>93%</td>
<td>99%</td>
</tr>
<tr>
<td>False Negative</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>False Positive</td>
<td>44%</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internalizing</th>
<th>&quot;At-Risk&quot;</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>.34</td>
<td>.48</td>
</tr>
<tr>
<td>Specificity</td>
<td>.92</td>
<td>.89</td>
</tr>
<tr>
<td>Efficiency</td>
<td>.82%</td>
<td>.87%</td>
</tr>
<tr>
<td>Positive Predictive Power</td>
<td>46%</td>
<td>16%</td>
</tr>
<tr>
<td>Negative Predictive Power</td>
<td>.87%</td>
<td>98%</td>
</tr>
<tr>
<td>False Negative</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>False Positive</td>
<td>66%</td>
<td>52%</td>
</tr>
</tbody>
</table>
Discussion and Limitations

- Current findings indicate high level of agreement between SSBD and BIMAS-2 in regard to externalizing behavior
  Sensitivity- Some risk .56, Clinical: .86

- Findings low level of agreement between SSBD and BIMAS-2 for internalizing
  Sensitivity- Some risk: .34, Clinical: .48

- SSBD has commonly been referred to as the “gold standard” for behavioral screening; does ok with externalizing, but internalizing— not so much

- SSBD’s low sensitivity for students in the some risk category is also a concern (think early intervention)

- Difficulties with Multiple gating procedures
  - Only students nominated for gate 1 get further assessment
  - Validation studies don’t typical include classification stats for known clinical and typical students
  - Not suitable for progress monitoring
  - Doesn’t appear to identify students in the “Yellow Range”- best time for intervention
Implications

National CDC youth risk Survey (2017) results indicate within the last 12 months;

• 31% of students felt hopeless
• 17-19% seriously considered suicide
• 14-15% developed a plan
• 7% attempted suicide- in a high school of 1000 students that’s 70!

Why is this concerning?

• MG methods under-identify students at risk for/suffering from internalizing problems
• Suicide is the 3rd leading cause of death for adolescents
• Each suicide increases risk for others
• Universal screening is time consuming but compare it to suicide response.
‘It’s OK to not be OK.’ How one high school saved lives with a 34-question survey

rooms around the building, the school’s ninth-graders whizzed through an mental health survey that would soon deliver real-time data to the group in the nce room. They were a triage team of sorts — particularly interested in the to question 24, which asked how often students had had thoughts of hurting ves within the past week.

The overarching message to students, said Jamie Murray, a district psychologist who helped coordinate the effort, was “It’s OK to not be OK.”
FALL RESULTS: CCHS

- 993 Teacher Reports Completed
- Risk areas are parallel to MTSS Triangle
  - 80-90% Green (Tier I)
  - 10-15% Yellow (Tier II)
  - <5% Red (Tier III)
<table>
<thead>
<tr>
<th>Levels Of Risk</th>
<th>Conduct</th>
<th>Negative Affect</th>
<th>Cognitive/Attention</th>
<th>Levels Of Functioning</th>
<th>Social</th>
<th>Academic Functioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Risk</td>
<td>20 (2%)</td>
<td>162 (19%)</td>
<td>68 (8%)</td>
<td><strong>Concern</strong></td>
<td>187 (23%)</td>
<td>82 (10%)</td>
</tr>
<tr>
<td>Some Risk</td>
<td>109 (13%)</td>
<td>299 (36%)</td>
<td>244 (29%)</td>
<td><strong>Typical</strong></td>
<td>592 (71%)</td>
<td>681 (82%)</td>
</tr>
<tr>
<td>Low Risk</td>
<td>702 (84%)</td>
<td>370 (45%)</td>
<td>519 (62%)</td>
<td><strong>Strength</strong></td>
<td>52 (6%)</td>
<td>68 (8%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>831 (100%)</strong></td>
<td><strong>831 (100%)</strong></td>
<td><strong>831 (100%)</strong></td>
<td><strong>Total</strong></td>
<td><strong>831 (100%)</strong></td>
<td><strong>831 (100%)</strong></td>
</tr>
<tr>
<td>Grade</td>
<td>Total Endorsement</td>
<td>Percentage</td>
<td>1: Rarely 1-2 times Minimal Extent</td>
<td>2: Sometimes 2-3 times Moderate Extent</td>
<td>3: Often 5-6 times Significant Extent</td>
<td>4: Very Often 7 or greater Extreme Extent</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------</td>
<td>------------</td>
<td>-----------------------------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>9th</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>229</td>
<td>74/229=32%</td>
<td>36</td>
<td>19</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Spring</td>
<td>220</td>
<td>55/220=25%</td>
<td>32</td>
<td>17</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>10th</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>239</td>
<td>54/239=23%</td>
<td>22</td>
<td>20</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>247</td>
<td>48/247=21%</td>
<td>20</td>
<td>14</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>11th</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>187</td>
<td>50/187=27%</td>
<td>23</td>
<td>17</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>192</td>
<td>37/192=19%</td>
<td>23</td>
<td>9</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12th</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>177</td>
<td>57/177=31%</td>
<td>23</td>
<td>14</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Spring</td>
<td>148</td>
<td>26/148=18%</td>
<td>10</td>
<td>13</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Fall: 236/832=28%
Spring: 143/807=18%
HOW WE ARE USING RESULTS?

- Intervening with high-risk students
- Increased school-based counseling services from community agencies
- Standardized referral process for counseling supports with a tracking system
- Training in nonsuicidal self-injury
- Updated Suicide protocols

- SHP-SEL Curriculum Delivery
- Assessing the need for a suicide prevention program
- MTSS/PLC meetings
- Psychoeducational groups on stress management, anxiety strategies, healthy relationships, coping mechanisms, mindfulness, etc.
- Mental Health School Campaign
CCHS Negative Affect (60+) by Cohort - Student Report

- **Cohort 2 (2020)**
- **Cohort 3 (2021)**
- **Cohort 4 (2022)**
- **All Grades**

**Data Key**
- Blue: Fall 2018
- Red: Spring 2019
- Yellow: Fall 2019
## Student Self-Reports of High Risk Negative Affect or Self Harm Ideation

<table>
<thead>
<tr>
<th></th>
<th>Spring 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Risk</td>
</tr>
<tr>
<td>Fall 2018</td>
<td></td>
</tr>
<tr>
<td>High Risk</td>
<td>39</td>
</tr>
<tr>
<td>Not High Risk</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
</tr>
</tbody>
</table>

There were 112 students who self-identified as high risk in the fall. Of those, 73 did not identify by the spring, a 65% reduction.
## Reasons Students were Identified as High Risk

### Student Ratings

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-score of 70 on Negative Affect Scale of BIMAS</td>
<td>85</td>
<td>57.4</td>
</tr>
<tr>
<td>Item 24 Score of 3 or 4</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>70 T-score and High Item 24</td>
<td>55</td>
<td>37.2</td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
<td></td>
</tr>
</tbody>
</table>
Fall 18: Teacher Ratings Compared to Student Self-Ratings

<table>
<thead>
<tr>
<th>Teacher Eval</th>
<th>Student Eval</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High Risk</td>
<td>Not High Risk</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk</td>
<td>50</td>
<td>12</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not High Risk</td>
<td>98</td>
<td>672</td>
<td>770</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
<td>684</td>
<td>832</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sensitivity = 0.34 That is the proportion of students who self identified as high risk and were also identified as high risk by a teacher.
Student Self-Reports of High Risk Negative Affect or Self Harm Ideation when Criteria for NegAff Changed to T-Score of 70

<table>
<thead>
<tr>
<th></th>
<th>High Risk</th>
<th>Not High Risk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018</td>
<td>52</td>
<td>119</td>
<td>171</td>
</tr>
<tr>
<td>Not High Risk</td>
<td>46</td>
<td>615</td>
<td>661</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>734</td>
<td>832</td>
</tr>
</tbody>
</table>

There were 171 students who self-identified as high risk in the fall. Of those 119 did not identify by the spring, a 70% reduction.
Using PBIS to Address the Needs of Students with Internalizing Problem Behavior

Mark Weist  
University of South Carolina  
WEIST@mailbox.sc.edu

Rob Horner  
University of Oregon  
robh@uoregon.edu

Lucille Eber  
MW PBIS Network (IL)  
lucille.eber@midwestpbis.org

Key Words: Alignment, Mental Health, Internalizing Problem Behavior
D11 — Incorporating Universal Screening to Enhance Data-based Decisions for Students with Internalizing Needs

Leader Presenters: Joni Splett and Lucille Eber
Exemplar: Dama Abshier

Key Words: Screening, Mental Health, Teams
Reference

Challenges to focus on Internalizing problems

• Less visible problems less likely to be focused on generally and especially in the very busy environment of schools
• Lack of Tier 1 examples
• Staff generally not trained or supported for effective identification and intervention with these youth
Youth with Externalizing vs Internalizing Challenges

<table>
<thead>
<tr>
<th></th>
<th>Received Mental Health Services</th>
<th>Received Special Education Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Externalizing</td>
<td>85%</td>
<td>75%</td>
</tr>
<tr>
<td>Internalizing</td>
<td>65%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Distinguishing Internalizing from Externalizing Problems

- Externalizing problems are highly interactive and social
- By contrast, internalizing problems are notable for what they are not
- Social and academic “treading water” or “disappearing” while others are moving forward
- Examples: requesting to leave events, reduced participation in activities, poor completion of work, frequent trips to the school nurse, withdrawal from peer interaction
Reducing the Likelihood of Early Identification/Intervention

- A percentage of students with internalizing problems use academic achievement as a coping mechanism; hence, are doing “well” and are even less likely to be identified and offered support/help
Seligman (1974) — Learned Helplessness

• Internalizing behavior the result of multiple failed attempts to achieve social outcomes in appropriate ways, results in withdrawal, avoidance and an increase in self-delivered negative messages (e.g., “I can’t do this”)

• Contributes to self-fulfilling prophecies and negative spiraling
State of the Carolinas: Implementing School Mental Health and Positive Behavioral Interventions and Supports

by Joni W. Splett, Kurt D. Michael, Christina Minard, Robert Stevens, Louise Johnson, Heather Reynolds, Katharina Färber, and Mark D. Weist*

The Carolinas have a rich and diverse history. South Carolina was the first colony to declare independence from British rule during the American Revolution and the first state to declare secession from the Union at the start of the Civil War. The population of South Carolina is nearly 4.8 million. It is the 24th most populous state in the United States and has a diverse citizenry, including 64% Caucasian, 28% African-American, and 5% Hispanic residents (U.S. Census Bureau, 2012). Children and youth under the age of 18 make up 22.8% (41.38 mil a large number (25.8%) of North Carolina’s children live in poverty (Annie E. Casey Foundation & O’Hare, 2013).

Equally unfortunate, a high percentage of children attending public schools in the Carolinas perform below state standards. For example, in South Carolina, the number of children who perform below state standards in reading (17% in 3rd grade; 32% in 8th) and math (30% in 3rd grade; 30% in 8th) is substantial, and in North Carolina, the situation is considerably worse, with below standard scores in reading at 65% of Mental Health (SCDMH) has one of the strongest expanded school mental health (SMH) service programs nationally, and the grassroots effort to disseminate and support implementation of Positive Behavioral Interventions and Supports (PBIS) is benefiting from recent interest, renewed energy, and federal momentum.

The Interconnected Systems Framework

The trends in the Carolinas mirror national trends in children’s educational and mental health outcomes. The Carolinas are working to implement the Office of Special Education Programs’ Interconnected Systems Framework, which promotes a student-centered, data-driven, and collaborative approach to identifying and addressing needs in a comprehensive, multilevel, and multi-tiered system of support (OSEP, 2013). This framework is designed to ensure that all students have access to effective instruction, appropriate interventions, and support services to improve academic, behavioral, and social-emotional outcomes. It recognizes the importance of integrating multiple levels of support across all systems of care to provide a well-rounded, effective, and efficient approach to meeting the needs of all students.

By implementing the Interconnected Systems Framework, the Carolinas are taking a proactive approach to ensuring that all students, especially those facing challenges, have access to the necessary resources and support to thrive academically and behaviorally. This approach not only addresses immediate needs but also promotes long-term success by fostering a collaborative environment that values continuous improvement and evidence-based practices.

In conclusion, the Carolinas are making significant strides in implementing school mental health and positive behavioral interventions. The combination of their rich history, diverse population, and innovative educational systems provides a unique opportunity to create a model for other states to follow. As the Carolinas continue to develop and implement evidence-based practices, they will not only improve the outcomes for their current students but also set a precedent for future generations.
Key Rationale

• PBIS and SMH systems are operating separately
• Results in ad hoc, disorganized delivery of SMH and contributes to lack of depth in programs at Tiers 2 and 3 for PBIS
• By joining together synergies are unleashed and the likelihood of achieving depth and quality in programs at all three tiers is greatly enhanced
Interconnected Systems Framework (ISF) Defined

- **Structure and process** for education and mental health systems to interact in most effective and efficient way

- Guided by **key stakeholders** in education and mental health/community systems, including youth and families

- Who have the **authority** to reallocate resources, change roles and functions of staff, and change policy
ISF Defined 2

– A strong, committed and functional team guides the work, using data at three tiers of intervention

– Sub-teams having “conversations” and conducting planning at each tier

– Evidence-based practices and programs are integrated at each tier, with implementation support and coaching

– SYMMETRY IN PROCESSES AT STATE, DISTRICT AND BUILDING LEVELS
ISF Enhances MTSS Core Features

- **Effective teams** that include community mental health providers
- **Data-based** decision making that include school data beyond ODRs and community data
- Formal processes for the selection & implementation of **evidence-based practices** (EBP) across tiers with team decision making
- **Early access** through use of comprehensive screening, which includes internalizing and externalizing needs
- Rigorous **progress-monitoring** for both fidelity & effectiveness of all interventions regardless of who delivers
- Ongoing **coaching** at both the systems & practices level for both school and community employed professionals
PASS
Project About School Safety
Thanks to Funder and Disclaimer

- This project was supported by Award No. 2015-CK-BX-0018 awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.
STUDY DESIGN

• 24 Participating Elementary Schools
  • Charleston, SC (12)
  • Ocala, FL (12)
  • Prior to study all were implementing PBIS; none were implementing SMH
• Each school is randomized to one of three conditions
  • PBIS Only
  • PBIS + SMH (business as usual)
  • Interconnected Systems Framework (ISF)
• Intervention (ISF) in place for 2 academic years
• All students in the building are participants unless they opt of study
Data-Based Decision Making

Do your data capture internalizing concerns?

Do your teams have capacity to plan/monitor interventions for internalizing concerns?
**UPDATE COMING SOON!!**

A Sample of Broadband, Empirically-Developed Screening Instruments

Below is a sample of instruments that were (a) developed for the purpose of screening, (b) validated with large samples of children, (c) and are broadband, or assess a range of social-emotional indicators.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Authors</th>
<th>Who to screen?</th>
<th>What to screen?</th>
<th>How feasible and practical is the use of the instrument?</th>
<th>How do you access the instrument?</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASC-2 BESS</td>
<td>Reynolds &amp; Kamphaus</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>BMAS</td>
<td>McQuigle, Bordas, &amp; Mier</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>DESSA-Mini</td>
<td>Naglieri, Loftrfs, &amp; Shapiro</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>MEERS</td>
<td>Kupps et al.</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SDQ</td>
<td>Goodman</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SAMP-Short</td>
<td>Merrill</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SHE</td>
<td>Furlong</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SBIS &amp; SEBEIS</td>
<td>Cook, Wilpe, &amp; Gresham</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>MRS-K</td>
<td>Shannon; Lane et al.</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SPS-PG</td>
<td>Elliott &amp; Gresham</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
<tr>
<td>SBQ (3rd. Ed)</td>
<td>Walker, Swenson, &amp; Feil</td>
<td>✓ ✓ ✓</td>
<td>✥ ✓ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
<td>✥ ✥ ✥ ✥ ✥ ✥ ✥</td>
</tr>
</tbody>
</table>

- **✓** Domain in Overall Score
- **✗** Domain Score Produced

Initial Expenses: manuals, forms, etc.
Annual Subscription: web-based account
- $/ per student
- $/ per class

- **R** Additional Cost
- Flex Monitoring: a flexible range of items may be selected for progress-monitoring
In PASS, did our data capture internalizing concerns?

- Used BASC-3 BESS Teacher with externalizing, internalizing, and adaptive skill subscales
- Compared students already receiving intervention to those newly identified by BASC-3 BESS Teacher

Splett et al. (2018)

180% increase in identified need with screener

In PASS, did our data capture internalizing concerns? YES!

- Paper in preparation

50% of newly identified had internalizing concerns
Does your team have capacity to plan/monitor interventions for internalizing concerns?

- Externalizing and internalizing concerns identified as problems at equal rates
- But externalizing rated as more severe and more concerning than internalizing
Does your team have capacity to plan/monitor interventions for internalizing concerns?

• Teachers who are more concerned and rate problem as more serious are more likely to refer student to school and community mental health professionals

• How can we ensure teams are concerned about internalizing concerns?
Does your team have capacity to plan/monitor interventions for internalizing concerns?

1. Ensure data triangulation doesn’t “wash out” internalizing concerns
   – Total Risk significantly correlated at 0.7 with Externalizing Risk but only .4 with Internalizing

2. Disaggregate screening data and intervention receipt by problem type
   – Are students with internalizing concerns receiving intervention at equal rates as those with other concerns?
TEAMING OUTCOMES

In ISF Schools…

• 3.7 times more meetings per quarter
• More Tier 1 discussion in ISF schools
• Greater attendance by principals, school counselors, school psychologists, and school mental health clinicians
• Longer meeting times (~25 minutes longer)
• Students at risk for or presenting EB problems (as rated by teachers) received more services in the ISF condition compared to the PBIS-only and PBIS+SMH conditions during the first year of intervention.
Prior to intervention, schools supported 9.6% of students identified with elevated risk for EB problems and 19.8% of students identified with extremely elevated risk for EB problems.

After one year of ISF intervention, ISF schools were serving 20.8% of students identified as elevated and 40.7% of students identified as extremely elevated.

Essentially doubled the number of students receiving needed services.
A greater proportion of African American students were connected to services in the ISF condition (47.7%) compared to the other two conditions (23.1%)
Negative Affect and Change Sensitivity

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Traditional test construction procedures are not aimed at finding change-sensitive measures (e.g., factor analysis).

Need a different set of item construction procedures:
- Key idea: Select items that evidence change in the presence of an intervention but show stability in the absence of an intervention.
- Edison’s problem with the light bulb: How to find a filament that emitted light but not heat.
- We’ve done a number of studies that demonstrate that test procedures that select change sensitive items evidence larger effect sizes than items selected through traditional measures.
- Interestingly, NA scales so created often evidence change across multiple interventions.
Emotion researchers have found negative affect (NA) and positive affect (PA) to be useful descriptions of basic emotions across individuals and cultures (Barrett, 2006b; Izard, 2007).

NA refers to emotions experienced as unpleasant or aversive (such as sadness and fear) while PA is affect experienced as pleasant states (such as happiness) (Barrett, 2006b).

Negative affect may be the closest psychological construct to a gold standard in terms of what should be assessed to monitor and assess client progress with internalizing disorders.
Two NA states, depression and anxiety, have been described as “the most common reactions to stressful life events” (Carter, 2007, p. 28).

Barrett (2006) suggested that affect “is a neurophysiological barometer of the individual’s relation to an environment at a given point in time” (p. 48).

Feelings inform individuals about their status in a perceived environment (Campbell-Sills & Barlow, 2007) and subsequently provide powerful motivation for human activity (Frijda, 1986; Izard, 2007).
Emotional dysregulation has become a key feature of many theoretical conceptualizations of mental health problems.

In many behavioral disorders, negative affect (NA) appears to play a key role in the initiation and persistence of the problem as well as its resistance to behavioral interventions (Moses & Barlow, 2006; Persons & Fresco, 2008). Working with client affect, then, is usually an essential element for change (Mergenthaler, 1996; Moses & Barlow, 2006).

A measure created specifically for assessing NA will tap into a key content domain critical for PMOA in Tier 2 and Tier 3 interventions.
Avoidance of the experience of NA may be a major pathway for the progression from normal NA to internalizing disorders.

Avoidance of affect, cognitions, and behaviors may be both a cause of clinical problems as well as a major reason that clients have difficulty providing valid reports of their psychological functioning.

And while knowledge of individuals’ tendency toward avoidance may be helpful for assessing their ability to benefit from psychotherapy, many children may be unable to produce invalid data.
PMOAs are measures that reflect students’ response to school based psychosocial interventions including the amount and type of intervention response students demonstrate.

PMOA data can be employed as the feedback about student progress.

PMOA measures can improve student outcomes by allowing service providers to identify child and adolescent students who are not responding to intervention and provide them the opportunity to alter the service provided.
Change-sensitive tests

- Construct validity of outcome assessments depends upon their sensitivity to change.
- Research suggests that items and tests vary in their ability to detect treatment effects.
- Traditional tests constructed in such a way to detect traits, not the states likely to show change from Tier 2 and Tier 3 interventions.
- We can discuss the power of tests to detect effects of interest.
Traditional test construction procedures are not aimed at finding change-sensitive measures (e.g., factor analysis).

Need a different set of item construction procedures:
- Key idea: Select items that evidence change in the presence of an intervention but show stability in the absence of an intervention.
- Edison’s problem with the light bulb: How to find a filament that emitted light but not heat.
- Interestingly, NA scales so created often evidence change across multiple interventions.
Meier (2004, 2000, 1998) proposed a set of rules designed to select items and scales sensitive to change from interventions.

The central philosophy of these rules is that **intervention-sensitive items should change in response to an intervention** and behave in a theoretically expected manner in other conditions (e.g., remain stable over time when no intervention is present).

Research indicates that application of these rules during scale construction leads to scales with:

- demonstrated larger treatment effect sizes,
- adequate reliability estimates.
Available PMOA measures suitable for use in schools: Current Issues

- Dart et al. (2018) conducted a systematic review of the literature to find PM measures for internalizing symptoms for students.

- Identified 15 PM assessments for internalizing symptoms, 8 of which seen as practical for frequent use within school settings.

- Dart et al. focused on identifying brief internalizing measures that could be employed weekly for PM purposes.
Internalizing PM measures

- Few of the identified scales reported information about reliability and validity estimates.

- Dart et al.’s criteria specified that PM tests (a) could be completed in 5 minutes or less or (5) contained 12 or fewer items.

- These are debatable criteria given that (a) the optimal interval of administering PM measures is typically unknown for clinical problems and populations and (b) reliability estimates decrease with fewer items.
Instruments that could be employed in clinical settings included:

- Brief Problems Checklist (Chorpita et al., 2010, and Tsai et al., 2016)
- Children’s Yale-Brown Obsessive Compulsive Scale (CY-BOCS; Sukhodolsky et al., 2013)
- Positive and Negative Affect Scale (PANAS-C; Forbes et al., 2012)
- Direct Behavior Ratings (DBR; Dart et al. (2015))
- Outcome Questionnaire (OQ; Vermeersch et al, 2000).

Moulton et al. employed an archival database of about 24,000 K-12 students (mean age = 11) who had completed the SAEBRS.

SAEBRS items in the database had been completed online using a 4-point Likert response format, with items presented one at a time, during 3 administrations over the course of an academic year.
Moulton et al. (2019) first evaluated the items via CFA and IRT methods, resulting in the selection of 9 items (3 per 3 scales of the SAEBRS) that included 3 items on the emotions subscale (NA).

For the subsequent change-sensitive analyses, a subset of children (n = 774) was chosen whose risk score on the SAEBRS indicated that they “would be most likely to receive targeted (Tier II) interventions” (Moulton et al., 2019, p. 3).
Examining change in scores across 3 administrations (at least 60 days apart), a pattern of results emerged indicating that

- (a) statistically significant differences in items scores were present across administrations,
- (b) item effect sizes for these changes were small ($w^2$ ranged from .01 to .04), and
- (c) change across item scores primarily occurred from Time 1 to Time 2, but not from Time 2 to Time 3.
Issues in Moulton et al.’s (2019) study

- Uncertainty about how many children in the change sensitive sample actually received an intervention.
- Use of younger children’s self-report (K-12) sample.
- Sequence of analyses; the CFA and IRT analyses eliminated 11 of 20 SAEBRS items before change sensitivity analyses occurred.
- Timing of administrations (3 administrations, 60 days apart).
In summary…

- We have made progress in creating progress monitoring and outcome assessment measurements for NA constructs.
- We still have many basic questions to be addressed:
  - Cross validation of change sensitive items
  - Demographic influences on change sensitive items
  - Source differences with change sensitive items (teachers: Elem vs second)
- Much of the development of these measures is by private companies.
- Why so little grant funding?