




*A Multi-Tiered
System of Supports*

**DEVELOPMENT OF A
SCHOOL-LEVEL TOOL TO
MONITOR MTSS
IMPLEMENTATION**


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**Welcome
and
Introductions**




Advance Organizer

- Our Vision of MTSS
- Self-Assessment of MTSS (SAM)
 - SAM Development Procedures
 - Spring 2015 National Pilot Study
 - SAM Psychometric Properties
 - Conclusions
 - Implications for School Psychologists
- Questions and Comments



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OUR VISION OF MTSS



What is MTSS?

- MTSS=Multi-Tiered Systems of Support
- Evidence-based instruction delivered to students in varying intensities (multiple tiers) based on student need
- Utilization of data-based problem-solving to integrate academic and social-emotional instruction and intervention
- Use of data to make educational decisions

Our Vision of MTSS


- The collaborative vision of the PS/Rtl and the PBIS:MTSS Projects is to:
 - Enhance the *capacity* of all Florida school districts to successfully implement and sustain a *multi-tiered system* of student supports with *fidelity* in every school

Why This Instrument?


- Our Inter-Project vision: to enhance capacity of districts to support MTSS with fidelity in schools
- Current tools not adequate for assessing all components of MTSS
- Desire for an instrument to guide action planning towards improved implementation

Purpose of the Study

- Develop a self-report instrument for schools to evaluate implementation of MTSS
- Examine the psychometric properties of a school-level assessment of MTSS implementation
 - What is the factor structure of the SAM?
 - What is the reliability of the resultant factors?
 - To what extent does the SAM relate to the Benchmarks of Quality (BOQ) and other behavioral outcomes?



SAM DEVELOPMENT PROCEDURES



SAM Development Steps

1. Literature review
2. Construct/theory development
3. Item generation
4. Expert review panel
5. Cognitive interviewing
6. Initial pilot (Fall 2013)
7. National pilot (Spring 2015)

- “Gold standard” survey development procedures recommended by DeVellis (2012)

Initial Item Development

- Review of *SAPSI* and additional school-level measures of RtI/MTSS/PBIS
- Review of literature on RtI/MTSS/PBIS implementation, systems change, educational reform initiatives
- Feedback from Inter-Project Leadership Team and Project staff members
- Development of 3-point scoring rubric

Expert Review Panel

- 11 district-, state-, and national-level experts on RtI/MTSS and PBS implementation
- Feedback on item relevancy and clarity/conciseness
- 80% criterion used to identify quality items
- Items not meeting criteria revised by the evaluation team

Expert Review Panel (cont.)

- 97% of items met criterion for agreement that content was relevant
- 74% of items met criterion for clarity
- Qualitative feedback from reviewers was used to revise items not meeting 80% criteria

Cognitive Interviews

- 6 cognitive interviews were conducted
- Interviewees verbalized thought process for each item
- Provided feedback on difficult terms or jargon
- Items identified as problematic were revised by the evaluation team

Cognitive Interviews (cont.)

- Common feedback from interviewees included:
 - Some items were too wordy
 - Defining terms like “staff,” “stakeholders,” “implementation fidelity,” and “parent involvement”
 - One person cannot have all the information needed to rate every item
- Interviewees’ responses tended to be consistent with the items’ purpose and meaning



SAM STRUCTURE



Content Domains

- Leadership
- Building the Capacity/Infrastructure for Implementation
- Communication and Collaboration
- Data-Based Problem Solving
- Three-Tiered Instructional/Intervention Model
- Data-Evaluation

Scoring Rubric

- “0” = Not Implementing
- “1” = Emerging/Developing
- “2” = Operationalizing
- “3” = Optimizing

Sample Items

Self-Assessment of MTSS Implementation (SAM)				
Item	0 = Not Implementing	1 = Emerging/Developing	2 = Operationalizing	3 = Optimizing
Leadership Domain (Items 1-5)				
The principal is actively involved in and facilitates MTSS implementation	The principal does not actively support MTSS.	The principal communicates an urgent desire to implement MTSS, participates in professional development on MTSS, and is establishing an MTSS vision	and The principal actively supports the leadership team and staff to build capacity for implementation	and The Principal actively supports data-based problem-solving use at the school
A leadership team is established that includes 6-8 members with cross-disciplinary representation (e.g., principal, general and special education teachers, content area experts, instructional support staff, student support personnel) and is responsible for facilitating MTSS implementation	No leadership team with explicit responsibility for leading MTSS implementation exists	A leadership team exists that includes cross-disciplinary representation,	and The leadership team has explicit expectations for facilitating MTSS implementation,	and The leadership team members have the beliefs, knowledge, and skills to lead implementation efforts
The leadership team actively engages staff in ongoing professional development and coaching necessary to support MTSS implementation	The leadership team does not have a needs-based plan to provide staff with professional development or coaching to support MTSS implementation	A needs assessment is conducted to gather information on beliefs, knowledge, and skills to develop a professional development plan to support MTSS implementation	and A professional development plan is created based on the needs assessment and used to engage staff in ongoing professional development and coaching	and Ongoing professional development activities are informed by data collected on the outcomes of professional development and coaching for continuous improvement




FALL 2013 PRELIMINARY PILOT STUDY



Fall 2013 Pilot




- 2 states, 7 districts, 155 schools
- Reviewed descriptive statistics and qualitative feedback
- Revised survey (e.g., item clarity, errors, etc.) and added 5 items based on feedback
 - Scheduling (2)
 - Disaggregating data across groups
 - Allocation of resources
 - Monitoring of data sources



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SPRING 2015 NATIONAL PILOT STUDY

National Pilot Sample

- 8 states, 15 districts, 436 schools
- School type
 - 269 elementary
 - 75 middle
 - 69 high
 - 23 other (Alternative, Combined, etc.)
- Recruitment

Pilot Procedures

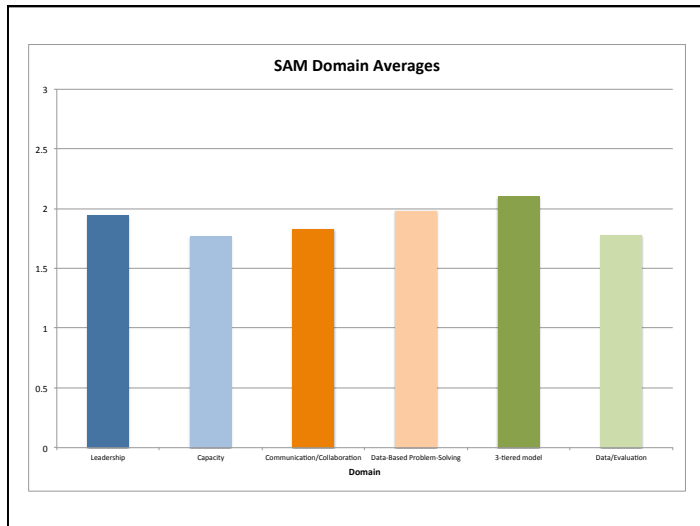
- SAM facilitator trainings
 - District contacts identified personnel responsible for administering the SAM
 - Project staff trained individuals on the SAM development and administration procedures
- School leadership teams completed the survey together, reported team consensus for each item
- Results graphed and disseminated to district contacts

Analyses

- Descriptive analyses
 - Mean scores by domain and item
 - Feasibility of use
- Confirmatory Factor Analysis (CFA)
- Internal Consistency Reliability Analyses
- Correlation between SAM and behavioral outcomes



DESCRIPTIVE ANALYSES




Mean Item Score Ranges


- Leadership
 - 1.54-2.36 (SD: .79-1.0)
- Capacity
 - 1.55-2.05 (SD: .70-.96)
- Communication
 - 1.78-1.93 (SD: .75-.97)
- DBPS
 - 1.77-2.18 (SD: .78-.87)
- Three-tiered model
 - 1.88-2.39 (SD: .62-.90)
- Data/Evaluation
 - 1.63-1.92 (SD: .78-.89)

SAM Feasibility Items

- Average time to complete: 1-1.5 hours
- Will SAM help your school implement?
 - Avg. score 3.55 (1: Not at all-5: Very)
- Will your school use the SAM again?
 - Avg. score 3.57 (1: Not at all-5: Very)



CONFIRMATORY FACTOR ANALYSIS (CFA)



CFA


- EFA vs. CFA
- 6-factor conceptual CFA based on 6 SAM domains
- Chi-square test of fit = 1734.06 ($p < .0001$)
- Root Mean Square Error of Approximation (RMSEA) = .059 (criteria $< .08$)
- CFI = .96 (criteria $> .95$)

CFA Factor Loading Ranges

- Leadership
 - .69-.93
- Capacity
 - .68-.85
- Communication
 - .66-.84
- DBPS
 - .62-.85
- Three-tiered model
 - .79-.91
- Data/Evaluation
 - .79-.87

CFA Factor Correlations						
	Leadership	Capacity	Comm.	DBPS	3-Tiered Model	Data and Evaluation
Leadership	*					
Capacity	.86	*				
Comm.	.79	.85	*			
DBPS	.79	.85	.87	*		
3-Tiered Model	.69	.75	.73	.86	*	
Data and Evaluation	.83	.90	.86	.88	.80	*




- ### Internal Consistency Reliability
- Leadership: .84
 - Capacity: .91
 - Communication: .79
 - Data-based problem-solving: .89
 - Three-tiered model: .90
 - Data and evaluation: .90



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SAM AND BENCHMARKS OF QUALITY (BOQ)

- ### Benchmarks of Quality (BOQ)
- Used to address implementation fidelity at the Tier I (universal) level of SWPBIS (Kincaid, et al., 2005, 2010; Cohen, et al., 2007)
 - 53 items organized around 10 critical elements, as well as a Total Score

SAM and Behavior Outcomes

- SAM (overall score) significantly correlated with BOQ
 - All schools: $r(188) = .31, p < .001$
 - Elementary: $r(117) = .23, p < .05$
 - High: $r(29) = .49, p < .01$
 - Secondary: $r(62) = .40, p < .01$
- SAM (overall score) significantly correlated with Out of School Suspension (OSS) days
 - All schools: $r(243) = -.14, p < .05$

SAM and Behavior Outcomes (cont.)


- SAM Leadership
 - BOQ (elementary): $r(117) = .26, p < .01$
 - ODRs (middle): $r(44) = .33, p < .05$
 - OSS events (middle): $r(44) = .32, p < .05$
 - BOQ (high): $r(29) = .44, p < .05$
 - BOQ (secondary): $r(62) = .33, p < .001$
 - ODRs (secondary): $r(80) = .26, p < .05$
- SAM Capacity
 - BOQ (high): $r(29) = .60, p < .001$
 - BOQ (secondary): $r(62) = .42, p < .001$

SAM and Behavior Outcomes (cont.)




- SAM Communication
 - ODRs (secondary): $r(80) = .27, p < .05$
- SAM Data-Based Problem-Solving
 - BOQ (elementary): $r(117) = .25, p < .01$
 - BOQ (middle): $r(33) = .38, p < .05$
 - ODRs (middle): $r(44) = .36, p < .05$
 - OSS events (middle): $r(44) = .33, p < .05$
 - OSS days (middle): $r(41) = .32, p < .05$
 - BOQ (high): $r(29) = .47, p < .01$
 - BOQ (secondary): $r(62) = .41, p < .001$
 - ODRs (secondary): $r(80) = .27, p < .05$

SAM and Behavior Outcomes (cont.)

- SAM 3-Tiered Model
 - BOQ (elementary): $r(117) = .36, p < .001$
 - BOQ (middle): $r(33) = .32, p < .05$
 - BOQ (secondary): $r(62) = .34, p < .01$
- SAM Data/Evaluation
 - BOQ (high): $r(29) = .41, p < .05$


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CONCLUSIONS




  

Conclusions

- Large sample size (436 schools)
- CFA indicated good model fit for 6-factor structure
- “Good” internal consistency reliability: .79-.91
- SAM correlated with BOQ and other behavior outcomes

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IMPLICATIONS FOR SCHOOL PSYCHOLOGISTS

Implications

- School psychologists on school-based leadership teams
 - Serve as facilitators during SAM administration
 - Support building-level interpretation of results
 - Help develop school-level action plans to address areas of need
 - Provide professional development related to areas of need
 - Engage in district-level problem-solving and planning related to common school needs

Thank You!

- Florida's Problem-Solving/Response to Intervention Project
<http://www.floridarti.usf.edu/resources/presentations/index.html>
– PPT on website (Resources → Presentations)
- Florida's PBIS:MTSS Project
<http://flpbs.fmhi.usf.edu/>

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