

Tier 2 Intervention and Progress Monitoring for Internalizing Behavior Concerns

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Association for Positive Behavior Support
March 31, 2023

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Learning Objectives

1. Participants will describe the core components of and existing evidence for (a) the Resilience Education Program, (b) the Calm Cat Program, and (c) progress monitoring tools for examining the effectiveness of internalizing behavior concerns.
2. Participants will receive guidance on making cultural adaptations to interventions for internalizing behaviors.
3. Participants will describe how to use data to identify students for these interventions and monitor their intervention progress.

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Mental Health Challenges

- Calls for increased emphasis on targeted intervention for subthreshold symptoms
 - NIMH, 2015
 - Community Preventive Services Task Force, 2019



“The CPSTF recommends targeted school-based cognitive behavioral therapy programs to reduce depression and anxiety symptoms among school-aged children and adolescents who are assessed to be at increased risk for these conditions.”

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Mental Health Challenges

- Two broad categories:
 - Externalizing problems
 - Internalizing problems*
- Problems exist along a continuum
 - Low risk
 - Subthreshold symptoms
 - Diagnosable disorder

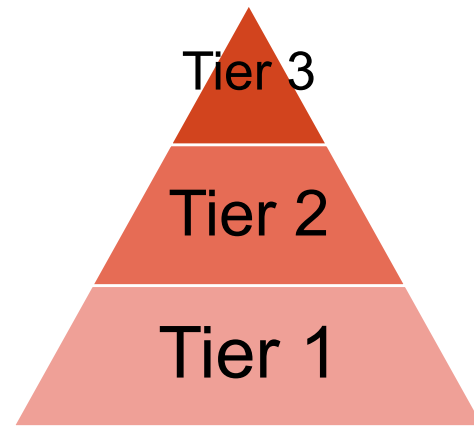


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Tier 2

- Reviews of the Tier 2 literature reveal strong attention to **externalizing problems** (Bruhn et al., 2014; Mitchell et al., 2012)
 - Less focus on *internalizing problems*
 - Several calls for increased focus in this area (Kilgus et al., 2015; McIntosh et al., 2014)
- Multiple options have been explored
 - Manualized small-group CBT
 - Check In/Check Out (CICO)
 - Courage and Confidence Mentor Program
 - Resilience Education Program (REP)



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The Resilience Education Program: A Tier 2 Intervention for Children with Internalizing Behaviors

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REP – Three Components

- **Cognitive behavioral instruction (CBI)**
 - Five lessons, taught across five weeks
 - Small-group format (3-5 students)
 - Focus on key skills
 - Coping skills
 - Cognitive restructuring
 - Problem-solving skills
- **Modified Check In/Check Out (CICO)**
 - Check in and out with a mentor each day
 - Teacher feedback throughout the day regarding skill use and other positive behaviors
 - Connection with parents
- ***Resilient Families (RF)**
 - Parent training on key skills and how to support CBI and CICO in the home




```

      graph TD
      REP[REP] --- CBI[CBI]
      REP --- CICO[CICO]
      REP --- RF[RF]
    
```




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REP – Theory

- **CBI**
 - Student-oriented
 - Instruct key social-emotional skills
- **CICO & RF**
 - Ecologically-oriented
 - Educators
 - Parents and caregivers
 - Prompt and reinforce student use of those skills

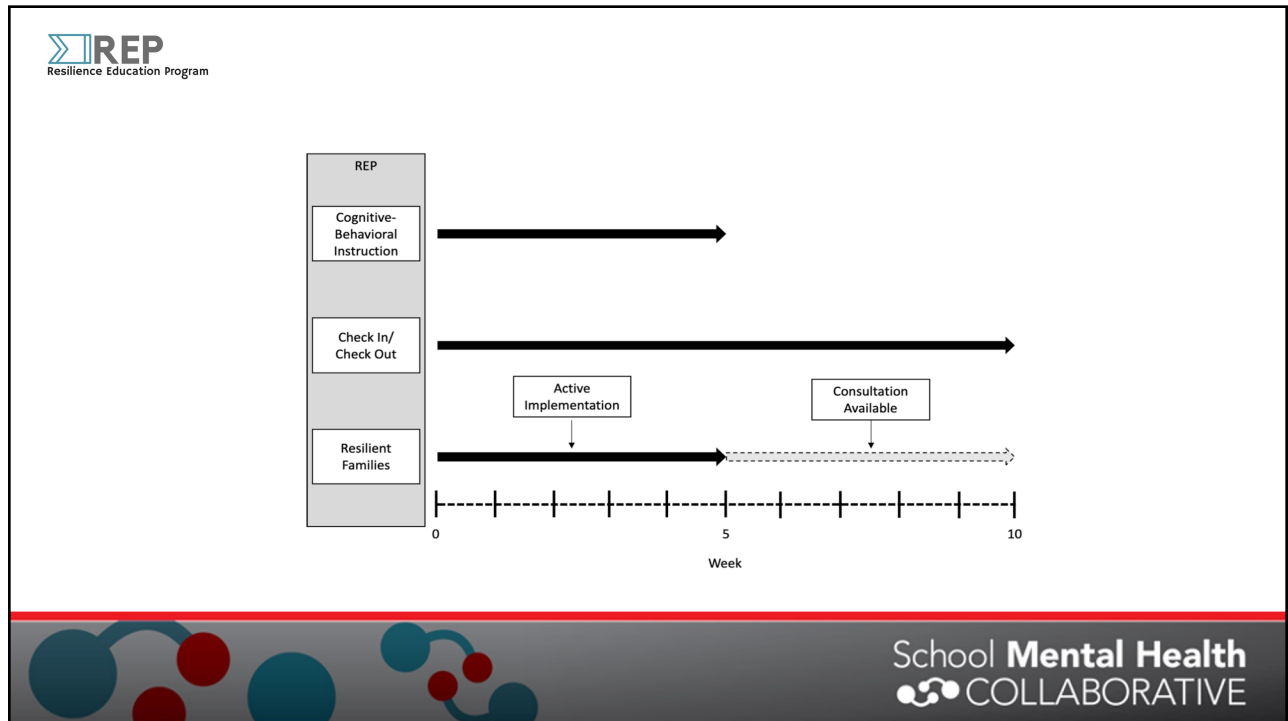


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      graph TD
      REP[REP] --- CBI[CBI]
      REP --- CICO[CICO]
      REP --- RF[RF]
    
```



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The slide features a photograph of a young boy with a wide smile in the foreground. In the background, two other children are visible. The slide includes the following text:

- REP** Resilience Education Program
- A Tier 2 Intervention for Internalizing Concerns**
- STEPHEN KILGUS, PH.D.
KATIE EKLUND, PH.D.
- Cognitive-Behavioral Instruction Curriculum**
- Resilience Education Program**
- Stephen Kilgus, PhD
Katie Eklund, PhD
Andy Garbacz, PhD

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Two Different Versions

The diagram consists of two orange rounded rectangles. The left one contains the text 'Elementary School (Grades 4-5)' and the right one contains 'Middle School (Grades 6-8)'. Both are set against a light pink background within their respective orange boxes.

Elementary School (Grades 4-5)

Middle School (Grades 6-8)

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The flowchart shows a sequence of five steps in orange rounded rectangles connected by arrows. The steps are: 1. Team building and introduction, 2. Identifying strong feelings, 3. Using coping skills to manage emotions, 4. Using cognitive restructuring, and 5. Using problem-solving strategies. The flow is from left to right for the first three steps, then down for the fourth, and then left for the fifth.

REP
Resilience Education Program

REP Intervention: CBI Lessons

Team building and introduction → Identifying strong feelings → Using coping skills to manage emotions

Using cognitive restructuring → Using problem-solving strategies

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REP Modification Options

Individual
diversity
considerations

Moving &
Grooving –
adaptations for
active students

Homework for
All Homes

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Recommendations

1. Group size (3-5 students)
2. Meeting frequency (1 vs. 2 per week)
3. Student groupings (grade and nature of concern)
4. Emphasize group expectations (pair with praise and reinforcement)
5. Review limits of confidentiality



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Recommendations

6. Co-lead the group
7. Level of need (Tier 2, not 3)
8. Identification of students for REP
9. Sensitivity to diversity of student and family needs (consider suggestions for modifications)



REP Daily Progress Report

_____’s Daily Progress Report (DPR)

Date: _____

Please rate the extent to which the student engaged in each of the following behaviors during each academic activity: 0 = Never, 1 = Sometimes, 2 = Often

	Controlled Emotions	Made Good Choices		Total Points	How I Felt
Morning work	0 1 2	0 1 2	0 1 2		
ELA	0 1 2	0 1 2	0 1 2		
Math	0 1 2	0 1 2	0 1 2		
Science	0 1 2	0 1 2	0 1 2		
TOTAL					
			Bonus?	+1	

Total percent = _____

Goal percent = _____

Reward provided? _____

REP mentor initials: _____

Goal met? Yes / No _____

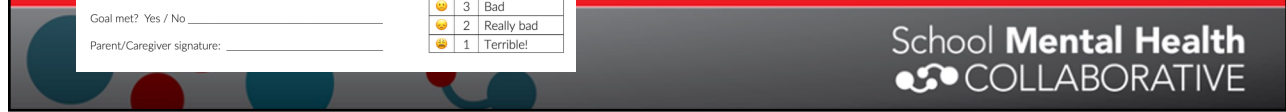
Parent/Caregiver signature: _____

How I Felt Scale

😊	7	Fantastic!
😊	6	Really good
😊	5	Good
😊	4	So-so
😊	3	Bad
😊	2	Really bad
😊	1	Terrible!

CICO Procedures

- **Teacher Feedback & Praise**
 - Give teacher DPR at start of activity – teacher acknowledges receipt
 - Teacher rates student behavior
 - CBI-aligned behaviors
 - Positive replacement behaviors (need to select)
 - Teacher delivers feedback and praise
 - Minimizes attention to inappropriate behavior
 - Student rates their mood
 - Behavior ↔ Mood

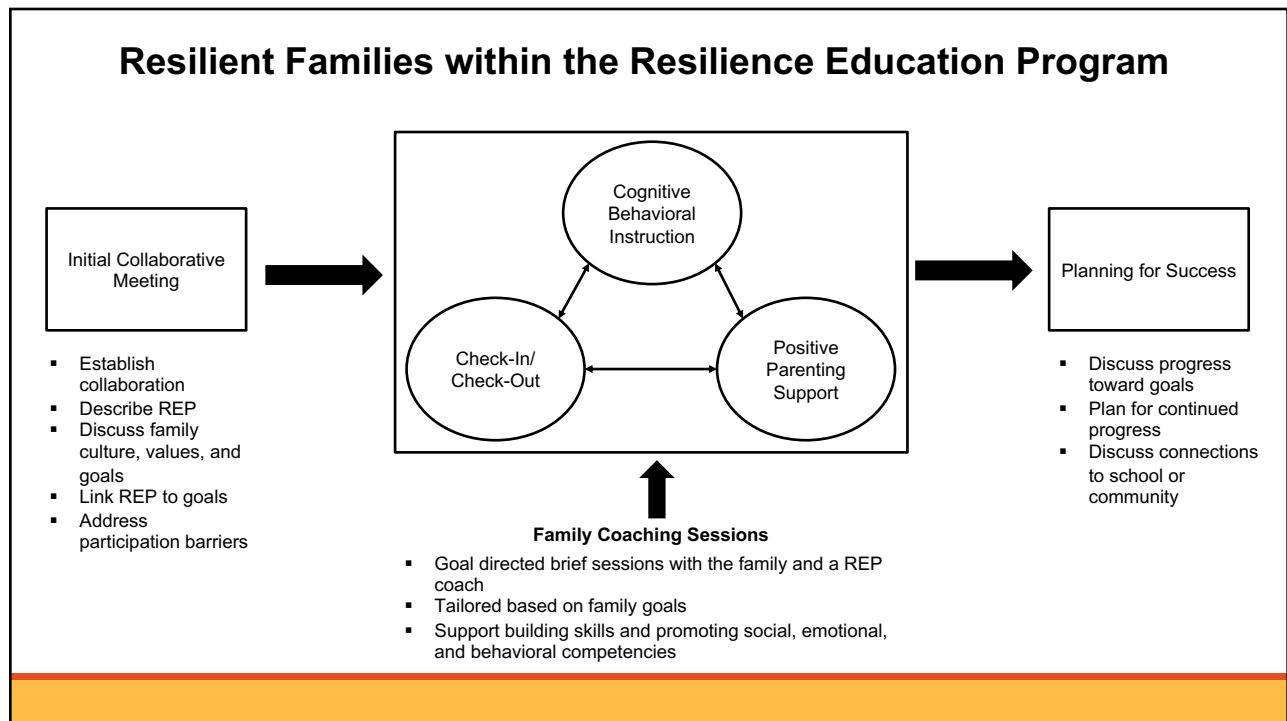


Resilient Families

- Integrated family support and collaboration
- Grounded in core features of family-centered and family-school-community partnership programs (Sheridan et al., 2019; Stormshak et al., 2011)
- Designed to be brief, goal-directed, and motivationally oriented
- Provides a framework for tailoring REP for families and building parenting skills, as well as a mechanism for fostering family-school partnerships



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Study 1: Single Case Design

- Allen, Kilgus, & Eklund, 2019
 - Three students
 - Multiple baseline, single-case design
 - Direct observation
 - Negative affect
 - Internalizing problems (e.g., worry, irritability)
 - Social engagement
 - Visual analysis
 - Clear improvement for 2 of 3
 - PAND (for 2 of 3)
 - Range = .75-.83
 - "Effective"

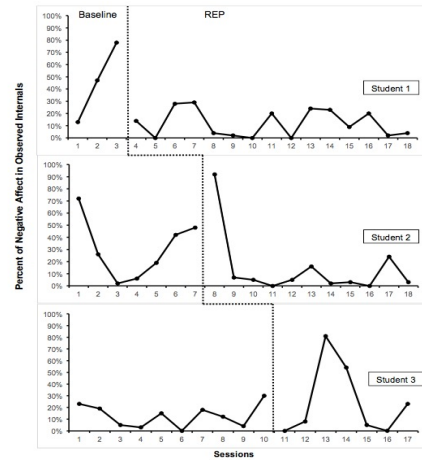
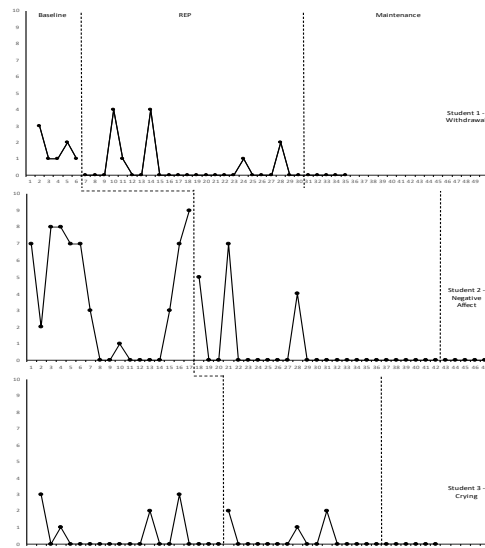


Figure 2. Multiple baseline design for student targeted internalizing behaviors.

Study 2: Single Case Design

- Eklund et al., 2021
 - Three students
 - Multiple baseline, single-case design
 - Teacher direct behavior ratings
 - Internalizing problems (e.g., withdrawal, negative affect)
 - Visual analysis
 - Clear improvement for 2 of 3
 - PAND (for 2 of 3)
 - Range = .79-.83
 - "Effective"





Study 3: Pilot Randomized Controlled Trial (RCT)

Kilpatrick et al., 2021

- Students in 4th - 7th grade in 4 schools
- Randomized to intervention & waitlist control groups
- Teachers and students reported decreased internalizing behaviors
- Large effect sizes of student-reported coping skills, social support, & control of internal states
- Teachers reported high levels of acceptability (easy to understand & feasible to use)

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Building an Efficient Targeted Intervention for Students At Risk for Internalizing Problems: *The Resilience Education Program (REP)*



Year 1: Planning and Development Process

Year 2: Feasibility of Implementation

★ Year 3: Component Analyses

Year 4: Pilot Efficacy Testing

Research Team:

Stephen Kilgus

Katie Eklund

Andy Garbacz

Tim Lewis

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Method

Participants

- 2 elementary schools in urban district
 - 9 students in Grades 4 & 5
- Universal screening & inclusionary criteria
 - Teacher BESS
- School psychologist & social worker co-led REP groups
 - 3-5 kids in each group



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Study Procedures

- Didactic REP training for group facilitators
- Systematic Direct Observation training
 - 4 school psychology graduate students
 - 80% agreement
- Targeted behavior screening in 4th & 5th grade classrooms
- Parent, teacher, & student consent
- Administered pre/post-test measures
- Conducted focus groups following REP implementation

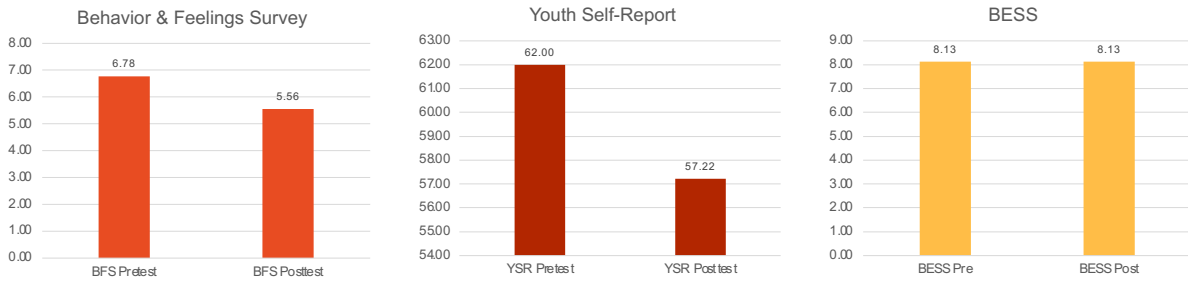
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Measures

- Pre-/post-test measures for children, parents, & teachers
 - ASEBA Youth Self-Report (Achenbach & Rescorla, 2004)
 - Behavior & Feelings Survey (Weisz et al., 2019)
 - BESS (Kamphaus & Reynolds, 2015)
- Conducted SDOs twice a week in each classroom
 - Academic engagement & social engagement
 - Withdrawal & negative affect
- Social validity rated by SMH staff & teachers
 - URP-Intervention (Chafouleas et al., 2011)

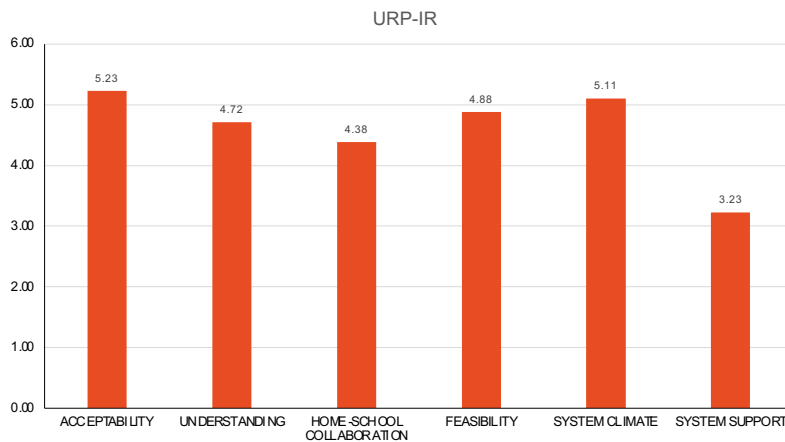
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Results – Internalizing Concerns



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Results – Usability and Feasibility



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Results – Focus Groups Themes

- Parent components of REP
 - Group facilitators: “This component of the intervention was challenging to implement. The initial meeting was great, but it was hard to maintain engagement as the intervention progressed.”
 - CICO mentors: “The teachers were unsure about their role in the parent component/collaboration aspect of the intervention”
- Strengthen the connection between intervention content and CICO mentors/classroom teachers
 - Increase communication with teachers and teacher knowledge of CBI

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Results – Focus Groups Themes

- Incorporate visuals
 - Group facilitators: Requested more visuals for the skills (e.g., CBT triangle)
 - CICO mentors: Classroom teachers requested a visual to tape to student’s desks for easy reference and to reinforce skills
- Frequency/dosage of intervention
 - Group facilitators: One group noted sessions were too frequent (twice weekly) for effective implementation in schools. They recommended sessions occur less frequently for a longer period of time.
 - CICO mentors/teachers: Recommended that the intervention incorporate more sessions over time for it to be more effective.

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REP Revision Examples

Area 1: CBI Lesson Materials	Area 2: Lesson/Session Content (CBI)	Area 2: Lesson/Session Content (RF)
Create/revise existing PowerPoint presentations for Lessons 1-5	Review Lesson 2 to reduce content	Planning for Success meeting: add list of community referrals to share with families
Create small lesson summary cards for Lessons 1-5 (for students)	Create 2 booster sessions	Initial Collaborative meeting: add content to gather information about situations that may trigger emotional responses to use as scenarios during CBI lessons
Create one-page summaries for Lessons 1-5 (for weekly emails)	Create inclusion activity/icebreaker for each lesson centered around emotions	
Create script for weekly emails	Create scenarios for examples to use in group	
Create visuals for each skill (STU, CHeT)	Revise lesson materials to reflect changes to acronyms, scenarios, and inclusion activities	
Create visuals of scenario characters (3)		

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Discussion

- Students reported decreases in internalizing behaviors following the REP intervention
- SDO demonstrated effects for 4 students, but floor effects for the remaining students
 - SDO may be a secondary data source given the limited periods we observed
- Teacher BESS data demonstrated small changes before & after intervention for a few students
- Teacher focus groups suggested teachers observed student’s use of REP skills in the classroom

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Accessing REP (for free!)

ONLINE:

<https://smhcollaborative.org/rep-materials/>



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Efficacy and Usability of a Targeted Relaxation Skills Training Program for Early Elementary Students

19th International Conference on Positive Behavior Support
March 31, 2023



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Acknowledgment

This work was supported by the **American Psychological Foundation** through the John and Polly Sparks Early Career Grant for Psychologists Investigating Serious Emotional Disturbance (2020 competition; PI: Zakszeski).



Objectives

By the end of this presentation, you will be able to:



Describe the initial development of a Tier 2 program for early elementary students with internalizing behavior risk



Summarize the results of a study examining this program's efficacy and usability

Rationale

Why is this work needed?



In search of an intervention that...

Targets **internalizing** behavior risk

Is feasible for implementation at **Tier 2**

Is suitable for implementation by **non-MH staff**

Is developmentally appropriate for **early elementary** students

Existing Intervention Models

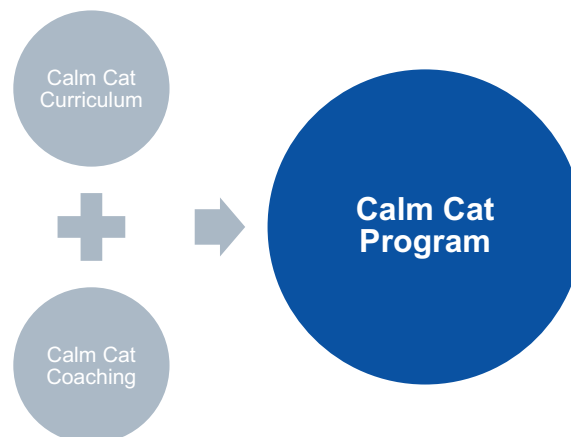
Cognitive-Behavioral Instruction (CBI) + Adapted Check-In/Check-Out (CICO)

- Courage and Confidence Mentor Program (CCMP; Cook et al., 2015; Fiat et al., 2017)
- Resilience Education Program (REP; Allen et al., 2019; Eklund et al., 2021; Kilpatrick et al., 2021)

Behavioral Skills Training

- Introduction > Model > Rehearsal > Feedback (Dib & Sturmey, 2012)
- Within CBI, behavioral coping skills is an accessible target

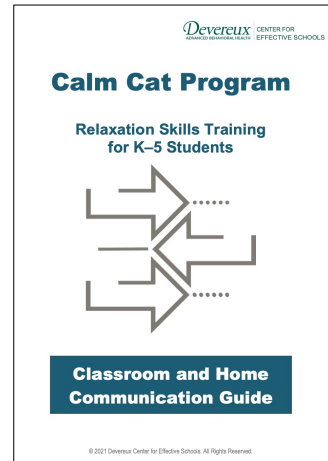
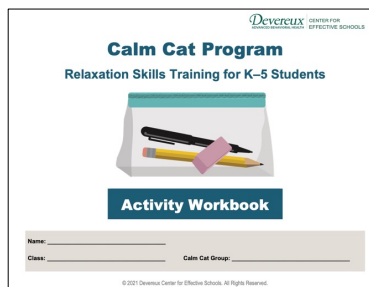
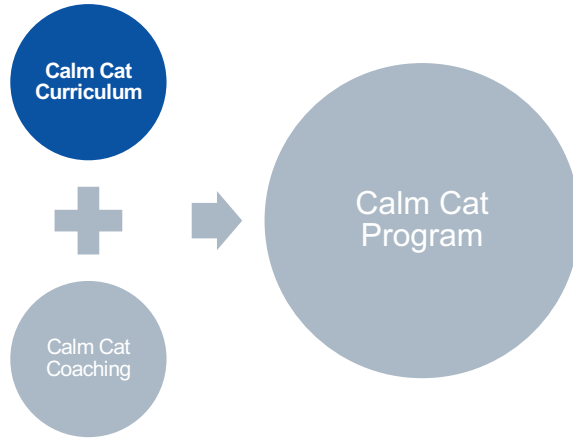
Introducing the Calm Cat Program



Introducing the Calm Cat Program

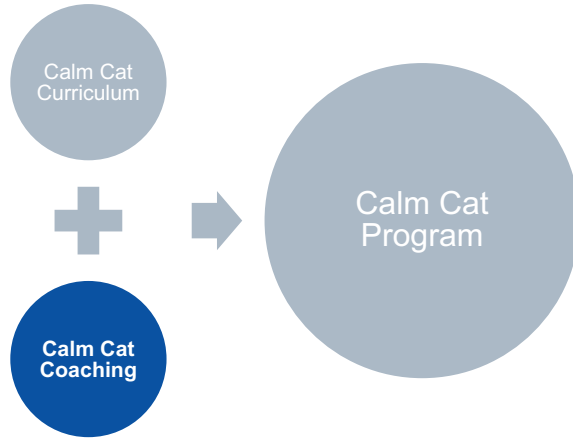
Core sequence:
Five 30-min group BST sessions

- Generalization and maintenance sessions:**
- Classroom generalization session
 - Family generalization session
 - Booster sessions (2)



Introducing the Calm Cat Program

Modified CICO procedure begins in Week 2 and extends beyond Calm Cat Curriculum groups



Calm Cat Coaching Card

Name: _____ Date: _____

Period	How Did I Feel?	Did I use a strategy? What strategy did I use?	If I used a strategy, did it help?	Teacher Feedback: Be Responsible by Controlling Emotions	Teacher Initials
	☹️ 😊 😊	<input type="checkbox"/> No strategy <input type="checkbox"/> Belly Breathing <input type="checkbox"/> Picture My Peaceful Place <input type="checkbox"/> Relaxing My Muscles	<input type="checkbox"/> No strategy <input type="checkbox"/> Yes <input type="checkbox"/> No	0 = More than 3 prompts/reminders to control emotions 1 = 2-3 prompts/reminders to control emotions 2 = 0-1 prompts/reminders to control emotions	
	☹️ 😊 😊	<input type="checkbox"/> No strategy <input type="checkbox"/> Belly Breathing <input type="checkbox"/> Picture My Peaceful Place <input type="checkbox"/> Relaxing My Muscles	<input type="checkbox"/> No strategy <input type="checkbox"/> Yes <input type="checkbox"/> No	0 1 2	
	☹️ 😊 😊	<input type="checkbox"/> No strategy <input type="checkbox"/> Belly Breathing <input type="checkbox"/> Picture My Peaceful Place <input type="checkbox"/> Relaxing My Muscles	<input type="checkbox"/> No strategy <input type="checkbox"/> Yes <input type="checkbox"/> No	0 1 2	

Teacher Comments: _____

Teacher Signature: _____

Parent/Guardian Comments: _____

Parent/Guardian Signature: _____

To help me control my emotions, I can use my Calm Cat strategies!

I can belly breathe.

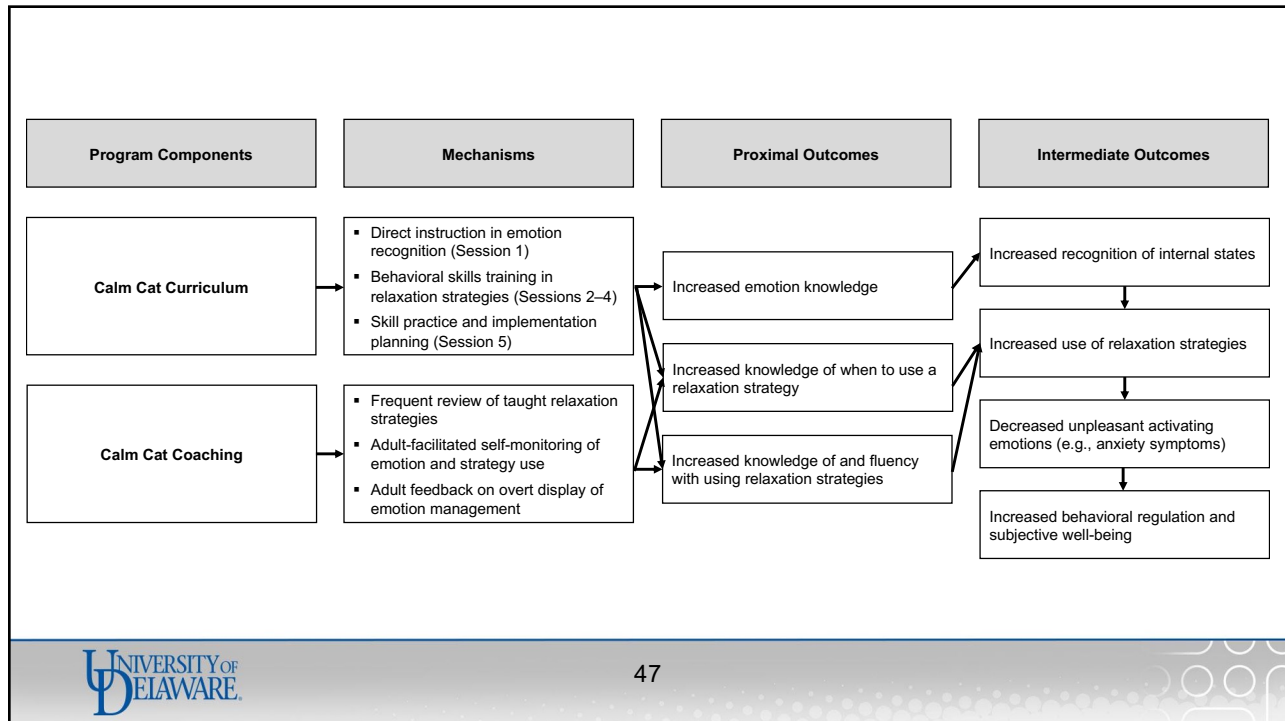
I slowly breathe in through my nose like I'm smelling a flower. 	I fill my belly up big like a balloon with air. I hold my breath there.
I slowly breathe out through my mouth like I'm blowing out a candle. 	I let the air out of my belly. My belly stretches like a balloon with no air.

I can picture my peaceful place. I can make a picture of this place in my mind. I can think about what this place looks like, sounds like, smells like, and feels like.

I can relax my muscles.

Get the Fly Off My Nose. 	Hide Like a Turtle.
Squeeze the Lemon. 	Stretch Like a Cat.
Bounce Through the Fence. 	Scratch My Feet in the Mud.





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Research Questions

To what extent does the Calm Cat Program increase students' knowledge of relaxation strategies and decrease their internalizing symptoms?

To what extent do gains in relaxation skills knowledge and reductions in internalizing symptoms associated with participation in the Calm Cat Program sustain over time?

How usable do school-based personnel and students find the Calm Cat Program?

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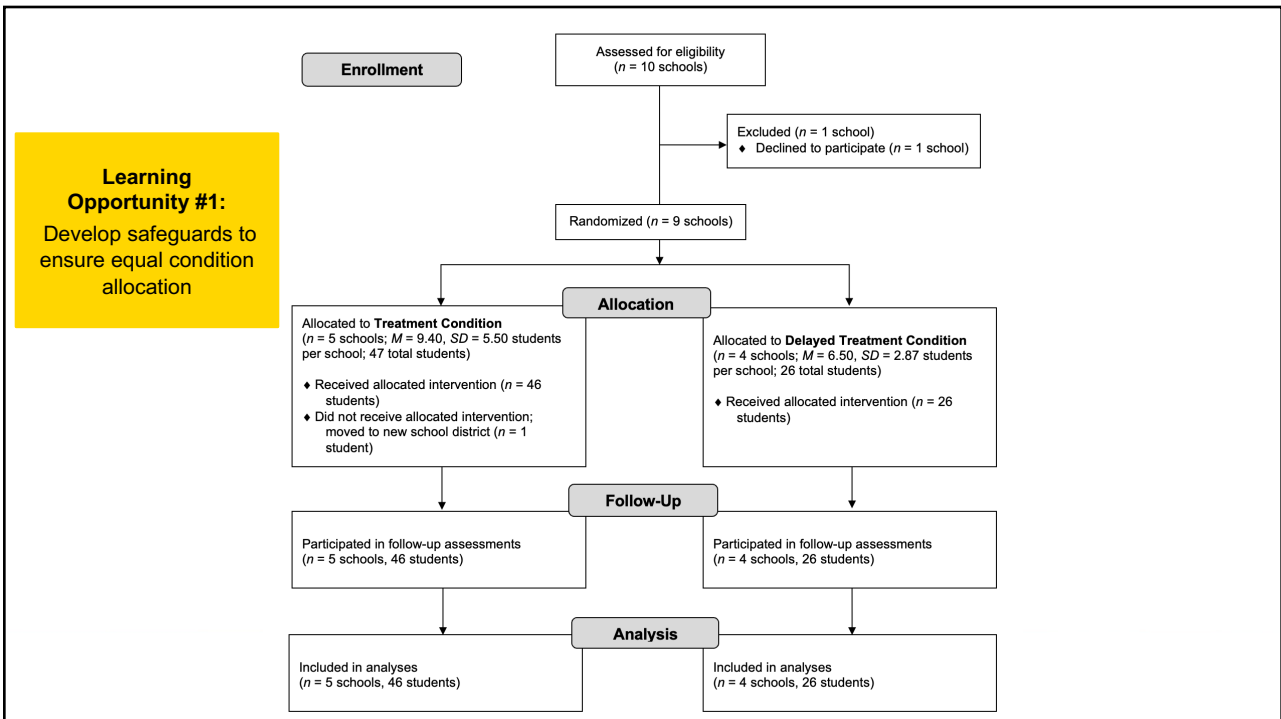
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Method

What did we do?



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Student Identification Process

- School-wide universal screening using the Teacher Rating Scale of the **Social, Academic, and Emotional Behavior Risk Screener** (SAEBRS; Kilgus & von der Embse, 2015)
 - Total Behavior Risk scores equal to or less than 36
 - Emotional Behavior Risk scores equal to or less than 16
- Student need profile evaluated by **Tier 2 team** to determine intervention fit
- Enrollment contingent upon (a) guardian consent and (b) student assent

Implementation Measures

*Did we do what
we said we
would do?*

Adherence

- Percentage of session components implemented assessed via session checklists

Dosage

- Percentage of sessions attended assessed via attendance logs
- Percentage of coaching check-ins completed assessed via coaching cards

Did it work?

Impact Measures

Direct assessment of skill knowledge

- Relaxation Skills Knowledge Assessment (RKSA)
- Curriculum-based assessment tool designed for the Calm Cat Program


Self-report of anxiety symptoms

- Screen for Child Anxiety Related Emotional Disorders, Child Version (SCARED-C)
- Birmaher et al. (1999)

Adult report of internalizing symptoms***

- Behavioral Assessment System for Children, 3rd Edition (BASC-3)
- Reynolds & Kamphaus (2015)

Learning Opportunity #2:
Plan realistic assessment procedures in collaboration with informants



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What did users think of it?


Usability Measures

Staff implementer perceptions

- Usage Rating Profile–Intervention, Revised (URP-IR)
- Briesch et al. (2013)
- Subscales: Acceptability, Understanding, Feasibility, Family–School Collaboration, System Climate, System Support

Student participant perceptions

- Children's Usage Rating Profile (CURP)
- Briesch & Chafouleas (2009)
- Subscales: Personal Desirability, Feasibility, Understanding



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	Screening	T1	Phase 1	T2	Phase 2	T3
Treatment Condition (TC)	SAEBRS	RSKA SCARED-C BASC	<i>Calm Cat Program</i>	RSKA SCARED-C BASC	<i>Treatment as usual</i>	RSKA SCARED-C BASC
Delayed Treatment Condition (DTC)			<i>Treatment as usual</i>		<i>Calm Cat Program</i>	



Results & Discussion

What did we find, and what does it mean?

To what extent does the Calm Cat Program increase students' knowledge of relaxation strategies and decrease their internalizing symptoms?

Measure	Condition	M (SD)		
		T1	T2	T3
RSKA	TC	5.41 (2.91)	7.62 (2.46)	6.98 (2.75)
	DTC	5.08 (1.74)	5.60 (2.29)	7.16 (2.56)
SCARED-C	TC	36.57 (13.76)	31.12 (13.64)	28.24 (15.54)
	DTC	33.58 (11.40)	33.40 (13.07)	29.76 (15.14)

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	DTC	33.58 (11.40)	33.40 (13.07)	29.76 (15.14)

Compared to DTC students, TC students had significantly greater performance gains on the RSKA ($F [1, 66.89] = 9.07, p = .004, \beta = .57, \eta^2 = .12$) and decreases in SCARED-C scores ($F [1, 66.58] = 9.29, p = .003, \beta = -.53, \eta^2 = .12$) between T1 and T2.

Measure	Condition	M (SD)		
		T1	T2	T3
RSKA	TC	5.41 (2.91)	7.62 (2.46)	6.98 (2.75)
	DTC	5.08 (1.74)	5.60 (2.29)	7.16 (2.56)
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	DTC	33.58 (11.40)	33.40 (13.07)	29.76 (15.14)

In the smaller DTC condition ($n = 26$), between T2 and T3, students had statistically significant performance gains on the RSKA ($t_{corrected} [25] = 2.51, p = .02, d = .53$), whereas reductions in SCARED-C scores were not statistically significant yet were characterized by a small (Cohen, 1988) effect size ($t_{corrected} [25] = -1.36, p = .18, d = -.37$).

To what extent do gains in relaxation skills knowledge and reductions in internalizing symptoms associated with participation in the Calm Cat Program sustain over time?

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- Scores were not statistically significantly different
- Small effect sizes in the direction of reductions in knowledge gains but continued reductions in anxiety symptoms post-intervention

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How usable do school-based personnel and students find the Calm Cat Program?

Usage Rating Profile – Intervention, Revised (URP-IR)		
Subscale	M	SD
Acceptability	4.83	.52
Understanding	5.33	.44
Feasibility	4.61	.74
System Climate	4.96	.34
Home–School Collaboration	4.00	.99
System Support	2.04	.72

Rating options ranged from 1 (*strongly disagree*) to 6 (*strongly agree*).

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How usable do school-based personnel and **students** find the Calm Cat Program?

Children's Usage Rating Profile (CURP)

Subscale	<i>M</i>	<i>SD</i>
Personal Desirability	3.29	.63
Feasibility	3.04	.68
Understanding	3.07	.61

Rating options ranged from 1 (*strongly disagree*) to 4 (*strongly agree*).

Takeaways

Preliminary evidence of **program efficacy**, but with notable limitations

- Limited sample

- Involvement of program developer and research team

- Unbalanced treatment conditions

- Lack of adult ratings and non-anxiety measures of internalizing symptoms

Limited variability in **usability ratings** (generally favorable impressions reported), but with some implementers suggesting a need for further grade differentiation

References



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Allen, A. N., Kilgus, S. R., & Eklund, K. (2019). An initial investigation of the efficacy of the Resilience Education Program (REP). *School Mental Health, 11*, 163–178. <https://doi.org/10.1007/s12310-018-9276-1>

Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 1230–1236. <https://doi.org/10.1097/00004583-199910000-00011>

Briesch, A. M., & Chafouleas, S. M. (2009). Exploring student buy-in: Initial development of an instrument to measure likelihood of children's intervention usage. *Journal of Educational and Psychological Consultation, 32*(1), 321–336. <https://doi.org/10.1080/10474410903408885>

Briesch, A. M., Chafouleas, S. M., Neugebauer, S. R., & Riley-Tillman, T. C. (2013). Assessing influences on intervention implementation: Revision of the Usage Rating Profile—Intervention. *Journal of School Psychology, 51*, 81–96. <https://doi.org/10.1016/j.jsp.2012.08.006>

Cook, C. R., Xie, S. R., Earl, R. K., Lyon, A. R., Dart, E., & Zhang, Y. (2015). Evaluation of the Courage and Confidence Mentor Program as a Tier 2 intervention for middle school students with identified internalizing problems. *School Mental Health, 7*, 132–146. <https://doi.org/10.1007/s12310-014-9137-5>

Dib, N., & Sturme, P. (2012). Behavioral skills training and skill learning. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 437–438). Springer.



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Eklund, K., Kilgus, S. P., Izumi, J., DeMarchena, S., & McCollom, E. P. (2021). The Resilience Education Program: Examining the efficacy of a tier 2 internalizing intervention. *Psychology in the Schools, 58*, 2114–2129. <https://doi.org/10.1002/pits.22580>

Fiat, A. E., Cook, C. R., Zhang, Y., Renshaw, T. L., DeCano, P., & Merrick, J. S. (2017). Mentoring to promote course and confidence among elementary school students with internalizing problems: A single-case design pilot study. *Journal of Applied School Psychology, 33*, 261–287. <https://doi.org/10.1080/15377903.2017.1292975>

Kilgus, S. P., & von der Embse, N. P. (2015). *Social, Academic, and Emotional Behavior Risk Screener* [Assessment instrument]. Fastbridge Learning.

Kilpatrick, K., Kilgus, S. P., Eklund, K., & Herman, K. C. (2021). An evaluation of the potential efficacy and feasibility of the Resilience Education Program: A Tier 2 internalizing intervention. *School Mental Health, 13*, 376–391. <https://doi.org/10.1007/s12310-021-09428-8>

Reynolds, C. R. & Kamphaus, R. W. (2015). *Behavior Assessment System for Children (3rd ed.)* [Assessment instrument]. NCS Pearson, Inc.

Progress Monitoring Internalizing Behaviors

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What is Progress Monitoring?



Multi-tiered systems of support (MTSS)



Formative assessment process

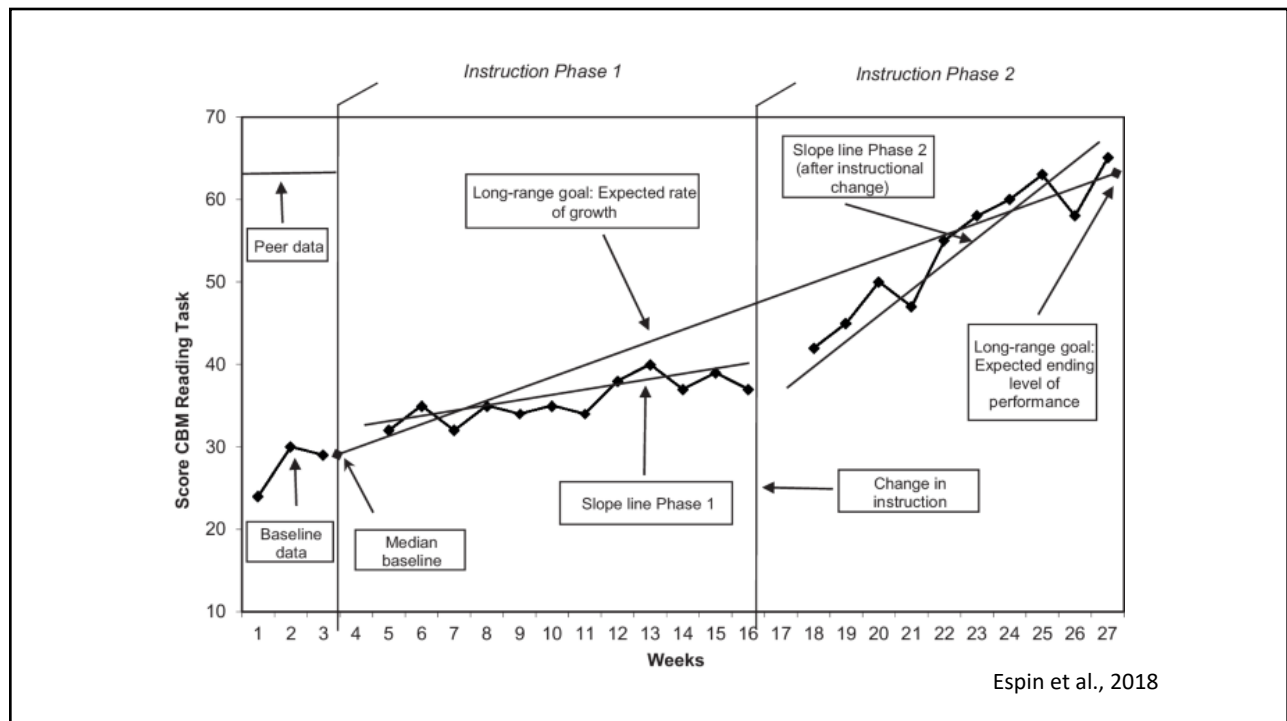


Make decisions about student response to intervention



Modify/Intensify/Reduce services as indicated

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Progress Monitoring Measures

Defensible

Flexible

Repeatable

Efficient

Christ et al., 2009

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Progress Monitoring Internalizing Behavior

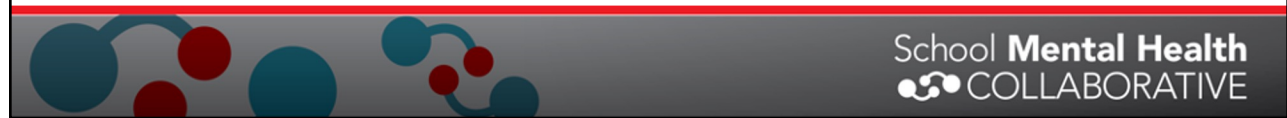
- Teacher-completed adapted Direct Behavior Rating (Dart et al., 2015)
- Researcher-completed systematic direct observation (Allen et al., 2018)
 - Social engagement, negative affect (e.g., frowning, tearful), targeted internalizing behavior (e.g., worry, irritability)
- Teacher-completed brief behavior rating scales (e.g., Briesch et al., 2022)
- Challenges compared to other domains of functioning



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Informant/Rater

- Who should rate students' internalizing symptoms?
- Cannot be directly assessed like academic skills or externalizing behavior
- Discrepancies across raters well-documented (e.g., Curhan et al., 2020)
- Student self-report may be useful as early as Kindergarten (von der Embse et al., 2023)



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Context

- In which context should the assessment occur?
- Variability in degree of contextual specificity
 - Children's Depression Inventory-2 (CDI-2; Kovacs, 2010) - Two weeks
 - Positive and Negative Affect Scale for Children (Laurent et al., 1999) – On average
- Frequency of measurement
 - Multiple times per day, daily, weekly
- Generalizability



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Internalizing Behavior Selection

- Which internalizing behavior(s) should be monitored?
- General Outcome Measure?
 - Internalizing composite
 - Compare to ORF as an index of reading skill
- Targeted based on screening data?
 - Anxiety vs. depression
- Individualized based on additional data
 - Specific internalizing behaviors



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Systematic Review of Assessments

(Dart et al., 2019)

- Assessment of symptoms related to internalizing disorders
- Administered at least weekly
- Used or recommended for use with youth aged 3-18



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Systematic Review of Assessments (Dart et al., 2019)

- Fifteen unique assessments identified
- Most were standardized rating scales
- Eight identified as pragmatically useful (i.e., less than 20 items)
- Varied in informant, context, and behavior measured

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Table 2 Assessment characteristic

Assessment	Study	# of Items	Modality	Rater	Frequency	Intended Setting	Domain
<i>DBR</i>	Dart et al. (2015) and von der Embse et al. (2015b)	3	<i>Paper</i>	<i>Self, teacher</i>	<i>Daily; multiple times per day</i>	<i>School</i>	<i>Internalizing; anxiety</i>
<i>Daily point sheets</i>	Puddy et al. (2008)	3–4	<i>Paper</i>	<i>Teacher, caregiver, clinician</i>	<i>Multiple times per day</i>	<i>School</i>	<i>Idiosyncratic behaviors</i>
<i>Systematic direct observation</i>	Howe and Barnett (2013)	7	<i>Direct observation</i>	<i>Trained observer</i>	<i>Daily</i>	<i>School</i>	<i>Idiosyncratic behaviors</i>
<i>PANAS-C</i>	Forbes et al. (2012)	8	<i>Telephone</i>	<i>Self</i>	<i>Multiple times per day</i>	<i>Clinic</i>	<i>Anxiety and depression</i>
<i>CY-BOCS</i>	Sukhodolsky et al. (2013)	10	<i>Paper</i>	<i>Clinician</i>	<i>Weekly</i>	<i>Clinic</i>	<i>OCD</i>
<i>BPRS</i>	Gresham et al. (2010)	12	<i>Paper</i>	<i>Teacher</i>	<i>Weekly</i>	<i>School</i>	<i>Social skills</i>
<i>Brief problem checklist</i>	Chorpita et al. (2010) and Tsai et al. (2016)	12	<i>Interview, telephone</i>	<i>Self, caregiver</i>	<i>Weekly</i>	<i>Clinic</i>	<i>Broadband</i>
<i>SAAI</i>	In-Albon et al. (2013)	12	<i>Paper</i>	<i>Self, caregiver</i>	<i>Weekly</i>	<i>Clinic</i>	<i>Anxiety</i>

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Practical Implications and Future Directions

- Defensibility of many of these assessments is unknown
 - Establish technical adequacy
- Consider prioritizing self-report of internalizing behaviors due to informant discrepancies
- Look at other fields for potential solutions (e.g., clinical psychology and EMA)

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Thank you - please stay in touch!

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