Classroom-Based Interventions and Implementation Factors at the High School Level

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Background

- Adolescents with EBD experience negative academic and behavioral outcomes
- Limited evidence-based interventions for adolescents with EBD

Center for Adolescent Research in Schools (CARS)

- Center grant funded 2008-2013
- Focused on secondary age students with intensive social, emotional, and behavioral problems
- Main purpose: develop and evaluate an intervention package
- Cross-disciplinary focus (special education and school mental health)

- Lee Kern, Ph.D., Lehigh University
- Steve Evans, Ph.D., Ohio University
- Tim Lewis, Ph.D., University of Missouri
- Howard Wills, Ph.D. & Debra Kamps, Ph.D., University of Kansas
- Mark Weist, Ph.D., University of South Carolina
- Paras Mehta, University of Houston

CARS Overview

- Years 1-2: Developed and refined assessments and the intervention package with small sample of students (n=38, 3 states)
- Year 3: Evaluated and refined the intervention package with larger sample of students (n=60, 6 states)
- Years 4-5: Evaluated the efficacy of intervention with large sample of students (n=647, 6 states)
  - Randomized control trial

Objectives for Today

- Describe the CARS classroom and individual intervention selection process
- Describe school staff demographic data
- Describe intervention ratings before and after implementation
- Discuss frequency of implementation and integrity of selected interventions
**Classroom Assessment Process**

- Classrooms identified based on C&C risk indicators
- Approached the teacher for consent
- Interview teacher
- Conduct classwide and individual student observations
- Interpret data to determine potential interventions
- Assess acceptability and feasibility of recommended intervention/s with teacher
- Determine final selection of interventions with teacher

**Participants/Setting**

- Classroom assessments completed with 315 teachers
  - 390 class-wide observations with 303 teachers
  - 462 target student observations
**Expectations & Routines**

- Provide structure and increase predictability of classroom environment
- Same instructional procedures used to teach academics:
  - Present the rule or routine. Post in prominent positions in the classroom at student eye level.
  - Discuss why the rule or routine is important.
  - Elicit and demonstrate examples and non-examples of the desired behavior.
  - Provide opportunities for practice with feedback.
  - Explain what will happen when the rule or routine is followed and what will happen if not followed.
  - Once taught, provide frequent and consistent acknowledgement for compliance.

**Teacher-Student Interactions**

- Increase ratio of positive to negative interactions (4:1)

**Specific Strategies**

- Classroom Structure
- Expectations and routines
- Improving Teacher-Student Interactions
- Academic Instruction
  - Opportunities to Respond (OTR)
  - Accommodations
- Responding to Problem Behavior
  - De-escalation
- Organization & Study Skills

**Classroom assessments = classwide observation and target student observations**

- Target classrooms identified through C&C

- What interventions were indicated?
- How were interventions indicated?
- Feasible? Acceptable?
- How were interventions ranked?
**Academic Instruction**

• Provide instruction that involves frequent opportunities to actively respond to academic requests (OTR):
  – Response Cards (RC)
  – Computer Assisted Instruction (CAI)
  – Class-wide Peer Tutoring (CWPT)
  – Guided Notes

• Accommodations

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**Responding to Problem Behaviors**

1. Identify triggers and intervene early in the chain.
2. Set up environment to reduce “triggers” and teach students skills to handle those that cannot be controlled.
3. Create “new chains” and reinforce student use.

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**Organization & Study Skills**

• Students learn to use a daily planner and missing assignment tracker to track assignments due; and/or an organizational checklist to support binder and book bag organization

• Students introduced to study skills and habits designed to promote student success on tests and quizzes:
  – **Flash Cards**- improving retention and recall of lists, terms, definitions, and facts
  – **Strategic test/quiz study skills** provide structure for students who have difficulty studying effectively
  – **Test Taking Strategies** - introduces methods for students to recognize types of test items (e.g., short answer, matching) and link them to strategies they have learned for approaching the items

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**Assessment-Based Indicators**

<table>
<thead>
<tr>
<th>Classwide Interventions</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations</td>
<td>High rate of disruptive behavior</td>
</tr>
<tr>
<td>Routines</td>
<td>Lack of evidence of routines</td>
</tr>
<tr>
<td>De-escalation</td>
<td>Evidence of teacher escalating student behavior (e.g., argues with student, doesn’t maintain personal space, uses sarcastic language)</td>
</tr>
<tr>
<td>Opportunities to Respond</td>
<td>No evidence of use of OTR strategies</td>
</tr>
<tr>
<td>Positive Student Teacher Interactions</td>
<td>Low ratio of positive to negative feedback</td>
</tr>
</tbody>
</table>

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**Assessment-Based Recommended Interventions**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Recommended/Indicated (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing Assignment Tracking</td>
<td>77.00%</td>
</tr>
<tr>
<td>Study Skills</td>
<td>64.70%</td>
</tr>
<tr>
<td>Organizational Checklist</td>
<td>56.30%</td>
</tr>
<tr>
<td>Daily Planner</td>
<td>53.70%</td>
</tr>
<tr>
<td>PSTI (Individual)</td>
<td>55.37%</td>
</tr>
<tr>
<td>Expectations</td>
<td>50.83%</td>
</tr>
<tr>
<td>PSTI (Classwide)</td>
<td>49.04%</td>
</tr>
<tr>
<td>Opportunities to Respond</td>
<td>48.01%</td>
</tr>
<tr>
<td>Routines</td>
<td>26.35%</td>
</tr>
<tr>
<td>Accommodations</td>
<td>25.10%</td>
</tr>
<tr>
<td>De-escalation</td>
<td>13.12%</td>
</tr>
</tbody>
</table>
### Class-wide Assessment Sample Ratings

#### Intervention Ratings

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Feasibility</th>
<th>Acceptability</th>
<th>Unacceptable to whom?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSTI (Classwide)</td>
<td>86.14%</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>PSTI (Individual)</td>
<td>82.81%</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>Missing Assignment Tracking</td>
<td>78.00%</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>OTR</td>
<td>74.38%</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>Expectations</td>
<td>72.16%</td>
<td>No time</td>
<td></td>
</tr>
<tr>
<td>Routines</td>
<td>64.21%</td>
<td>No time</td>
<td></td>
</tr>
<tr>
<td>Daily Planner</td>
<td>64.10%</td>
<td>No time</td>
<td></td>
</tr>
<tr>
<td>Organizational Checklist</td>
<td>60.20%</td>
<td>Student</td>
<td></td>
</tr>
<tr>
<td>Accommodations</td>
<td>53.97%</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>De-escalation</td>
<td>53.10%</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Study Skills</td>
<td>47.60%</td>
<td>No time</td>
<td></td>
</tr>
</tbody>
</table>

#### Barriers to Feasibility

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Feasibility</th>
<th>Acceptability</th>
<th>Top Reason Not Feasible</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSTI (Classwide)</td>
<td>86.14%</td>
<td>Teacher</td>
<td>Already doing it; not interested; would not be helpful</td>
<td></td>
</tr>
<tr>
<td>PSTI (Individual)</td>
<td>82.81%</td>
<td>Other</td>
<td>Implementing another intervention; not a problem</td>
<td></td>
</tr>
<tr>
<td>OTR</td>
<td>74.38%</td>
<td>Other</td>
<td>Class make up; does not match class set up (group projects); student behavior</td>
<td></td>
</tr>
<tr>
<td>Expectations</td>
<td>72.16%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routines</td>
<td>64.21%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Planner</td>
<td>64.10%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Checklist</td>
<td>60.20%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>De-escalation</td>
<td>53.97%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodations</td>
<td>53.10%</td>
<td>Other</td>
<td>Not allowed; too many students; no need</td>
<td></td>
</tr>
<tr>
<td>Missing Assignment Tracking</td>
<td>47.60%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Skills</td>
<td>41.81%</td>
<td>No time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Target Student Assessment Sample Ratings

#### Intervention Ratings

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Rec.</th>
<th>Rank</th>
<th>Feasibility</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodations</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
<tr>
<td>Study Skills</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
<tr>
<td>Organization Checklist</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
<tr>
<td>Daily Planner</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
<tr>
<td>Daily Assignment Tracking</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
<tr>
<td>Positive Student Teacher Interactions</td>
<td>Yes</td>
<td>O No</td>
<td>O No</td>
<td>O No</td>
</tr>
</tbody>
</table>

#### Barriers to Acceptability

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Feasibility</th>
<th>Unacceptable to whom?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSTI (Classwide)</td>
<td>81.99%</td>
<td>Teacher</td>
</tr>
<tr>
<td>PSTI (Individual)</td>
<td>81.40%</td>
<td>Teacher</td>
</tr>
<tr>
<td>Missing Assignment Tracking</td>
<td>78.00%</td>
<td>Teacher</td>
</tr>
<tr>
<td>OTR</td>
<td>76.52%</td>
<td>Teacher</td>
</tr>
<tr>
<td>Expectations</td>
<td>71.25%</td>
<td>Teacher</td>
</tr>
<tr>
<td>Routines</td>
<td>61.63%</td>
<td>Teacher</td>
</tr>
<tr>
<td>Daily Planner</td>
<td>60.70%</td>
<td>Student</td>
</tr>
<tr>
<td>Organizational Checklist</td>
<td>56.80%</td>
<td>Student</td>
</tr>
<tr>
<td>Accommodations</td>
<td>51.79%</td>
<td>Teacher</td>
</tr>
<tr>
<td>De-escalation</td>
<td>49.21%</td>
<td>Teacher</td>
</tr>
<tr>
<td>Study Skills</td>
<td>45.23%</td>
<td>Teacher</td>
</tr>
</tbody>
</table>

**Classroom assessments = classwide observation and target student observations.**

**Teachers rated feasibility and acceptability and ranked interventions.**

**Target classrooms identified through C&C.**

**Monitored integrity.**

**What was the average integrity per intervention? How does integrity compare across interventions?**
Assessment of Acceptability-Post Implementation

- The School Intervention Rating Form (SIRF) – School Professional
  - Adapted from the Treatment Acceptability Rating Form-Revised (Reimers & Wacker, 1988).
  - 21 items and 4 open-ended items
  - 7-point Likert-type scale, ranging from “strongly disagree” to “strongly agree”
  - Components of acceptability considered low if ratings below “somewhat acceptable”

SIRF

1. How clear is your understanding of the intervention after working with your students?
   - Not at all clear
   - Not very clear
   - Somewhat clear
   - Very clear

2. How acceptable did you find the intervention to be regarding your concerns about your students?
   - Not at all acceptable
   - Not very acceptable
   - Somewhat acceptable
   - Very acceptable

3. How willing were you to carry out the intervention?
   - Not at all willing
   - Not very willing
   - Somewhat willing
   - Very willing

4. Given your students’ behavioral problems, how reasonable did you find the intervention to be?
   - Not at all reasonable
   - Not very reasonable
   - Somewhat reasonable
   - Very reasonable

Post Implementation Intervention Acceptability

- Acceptability (M)
  - Very = 112
  - Somewhat = 64

Number of Teachers Implementing Specific Interventions

- Teachers (n)

Mean Integrity of Specific Interventions

- Integrity (M)
  - Accommodation
  - Social Skills
  - Behavior
  - Melting Ambivalent Teacher
  - Daily Routines
  - Organization Checklist
  - OT
  - PFI
  - Expectations
Factor Analysis on SIRF

• Previous study conducted exploratory factor analysis
  – Reduced to 16 items (score range 0-112) representing 5 domains:
    • Suitability - quality of having properties that are favorable for intervention implementation by the teacher in his/her environment
    • Effectiveness - teachers' perceptions that the intervention resulted in student improvement
    • Fit - degree to which the intervention fits within the teachers daily routine
    • Affordability - the cost to the teacher to implement the intervention
    • Severity of behavior - teachers’ perception of the intensity of the student’s negative behavior

Summary & Conclusions

• Variety of interventions indicated by assessment:
  – Study skills and organizational skills (missing tracking assignments, organizational checklist, daily planer) most frequently indicated
• Overall interventions implemented with high integrity
• Classwide interventions rated overall as more acceptable and feasible compared to target-student interventions
  – “No time” and “other” most frequent barrier to implementation
  – Resources not mentioned often
• Overall, teachers rated interventions as highly affordable, fitting their routine, and suitable post-implementation
  – Interventions were rated at least somewhat effective 1 month post-implementation

Future Directions

• Identify what made teachers willing to adopt interventions
• Need to learn more about relationship between acceptability and integrity
• Examine more closely how we measure acceptability
• Examine student intervention ratings

Questions?

• Email: statet@mail.Montclair.edu

Thank You!

Center for Adolescent Research in the Schools (CARS)

www.ies-cars.org