Effective Positive Behavior Interventions for Students with Internalizing Behavior Problems

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Purpose

To compare the methods and outcomes of three second tier PBS studies designed to address internalizing behavior problems in elementary school students.
Definitions

Problem Behavior Classified as:

- **Externalizing**: directed outward, toward the social environment, easily observable
- **Internalizing**: directed inward, toward the individual, not easily observable

(Achenbach, 1982, 1991)
Internalizing Behavior

4 types of Disorders:
- Depression
- Anxiety
- Social withdrawal
- Somatic/physical complaints

(Merrell, 2001)
Internalizing Behavior

Negative influence on:
- Academic performance
- Physical health
- Future psychological adjustment
- Future employment opportunities

(Merrell & Walker, 2004; Flook, Repetti, & Ullman, 2005; Merrell, 2003; Merrell, 1994)
Emotional Disturbance

According to IDEA:

One or more of the following . . .

- Unexplained inability to learn
- Inability to build or maintain good relationships
- Inappropriate behavior or feelings
- General mood of unhappiness/depression
- Develop associated physical symptoms or fears
Referrals

Rarely referred because their behavior:

- Is difficult to observe
- Does not disturb other students
- Does not challenge the teacher’s authority
- Meets the teacher’s behavioral expectation

(Gresham & Kern, 2004)
Screening & Identification

- Systematic Screening for Behavior Disorders (Walker & Severson, 1992)
- Early Screening Project (Walker, Severson, & Feil, 1995)
- Child Behavior Checklist (Achenbach & Rescorla, 2001)
- Student Risk Screening Scale (Drummond, 1994)
- Internalizing Symptoms Scale for Children (Merrell & Walters, 1998)
- Preschool and Kindergarten Behavior Scales - 2 (Merrell, 1994)
Intervention

Approaches:
- Systematic desensitization
- Exposure-based
- Modeling
- Cognitive-Behavioral
- Antecedent- and consequence-based
- Social skills training

(Gresham & Kern, 2004)
Intervention

Limited research:

- Much of special education research has focused on classification and assessment rather than intervention (Gresham & Kern, 2004)
- Only 6 prevention or early intervention studies for children (Kendziora, 2004)
- Most studies outside of the school setting (Skinner et al., 2002)
- Generalization of outcomes to natural settings is difficult (Ollendick & King, 1994; Skinner et al., 2002)
3 Studies

- Linking Functional Behavioral Assessment to Peer-Mediated Positive Behavior Support
- A Playground Intervention for Students with Internalizing Behaviors
- Effects of the Strong Kids Curriculum on Students At-Risk for Internalizing Disorders
Linking Functional Behavioral Assessment to Peer-Mediated Positive Behavior Support
Research Questions

- Collaborative FBA
- FBA alignment with intervention
- Intervention “package”
- Social validity
  - Teacher - FBA & Intervention
  - Student
  - Peer
  - Normative sample
Setting

Urban elementary school
Approximately 573 students
53% Caucasian
40% Hispanic
7% Other ethnic groups

Title I school
67% free or reduced lunch
High mobility rate
## Participants

<table>
<thead>
<tr>
<th>Student</th>
<th>Peer</th>
<th>Comparison Group</th>
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<tbody>
<tr>
<td>Male</td>
<td>Male</td>
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<tr>
<td>3rd grade</td>
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<tr>
<td>Hispanic</td>
<td>Pacific Islander</td>
<td>7 classrooms</td>
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<td>2 parent home</td>
<td>2 parent (foster)</td>
<td>3 schools</td>
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<td>Learning disability</td>
<td>No disability</td>
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<tr>
<td>Low SES</td>
<td>Low SES</td>
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</table>
Dependent Variable
(Response Class)
Socially Appropriate Classroom Behavior
  Attending
  Working
  Getting the Teacher’s Attention Appropriately
  Reading Aloud
  Answering Questions
  Following Teacher Instructions
Other
  • Following Classroom Rules
Data Collection

Observers
- A former teacher
- A graduate student

How?
- 10 second whole interval
- Daily sessions
Interobserver Agreement

25 % of all observations

Student Agreement
Mean = 90%
Range = 84% to 98%

Comparison Group Agreement
Mean = 87%
Range = 80% to 91%
Problem Behaviors & Function

Problem Behaviors:
- Socially withdrawn
- Off-task
- Low rate of work completion
- Disrupting teacher

Function:
- Escape/Avoidance
- Attention
Aligning FBA Information to PBS Strategies

FBA

Initial Analysis of Problem Situation

Behavioral Assets

- Respectful in interactions with others (adults & peers), seldom absent, well-groomed, non-defiant, smiles-appears happy

Behavioral Deficits

- Socially Inappropriate Classroom Behavior
  - Wandering around the classroom, watching other students vs. doing own work, inappropriately getting the teacher’s attention, playing with non-instructional items, low rate of work completion

Clarification of Problem Situation

Analysis of self-control

- Independent work expected: Does not self-manage, seldom exhibiting socially appropriate classroom behavior

Developmental Analysis

Sociological

- Parents – Immigrants from Mexico
- Student – Bilingual, English fluent

Biological

- Classified learning disability, fine motor and upright posture deficits

Analysis of Physical Environment

- Teacher involved in reading groups, little time for giving assistance to students doing independent work

Analysis of Relationships

- Teacher – Seeks teacher’s help, appears to be comfortable in interactions with teacher
- Peers – Very little interaction with peers, watches them with interest, rarely initiates interaction, mostly ignored by peers

Motivational Analysis

- Low rate of reinforcement for appropriate behavior
- Reinforcement survey to identify potential reinforcers

Positive Behavior Support Plan Component

Positive alternative behaviors/skill

Development

- Respectful in interactions with others (adults & peers), seldom absent, well-groomed, non-defiant, smiles-appears happy

Self-management

- Self-awareness
- Self question: “How am I doing?” “Do I need help?”
- Rating card

- No intervention component was designed due to the following variables:
  - Jose’s English fluency
  - 48% of Jose’s classmates were Hispanic

Use of Peer to Mediate Intervention

- Peer monitoring
- Use of MotivAider to signal time intervals
- Marking of rating card
- Tokens & Praise
- Feedback
- Student and peer jointly award themselves points on rating card

- Peer and teacher reinforcement of alternative behaviors and self-monitoring

Reinforcers (from peer & teacher)

- Praise, tokens, & points
- Exchange for back-up reinforcers
Results
Work Completion Data

- Baseline
- PBS-RS 1
- Baseline
- PBS-RS 1
- PBS-RS 2
- PBS-RS 3
- PBS-RS 4
- PBS-RS 5

Average # of Centers/Day

Condition of Study

Baseline, PBS-RS 1, Baseline, PBS-RS 1, PBS-RS 2, PBS-RS 3, PBS-RS 4, PBS-RS 5
Social Validity: Teacher

FBA
- 80% of questions rated a 4 on a scale of 1-5
- Strongly agreed being involved in the assessment was good use of her time

PBS Plan
- 100% of questions rated a 5 on a scale of 1-5
- Practical, feasible & effective
- Would use the intervention again
Social Validity: Teacher

Increased social interaction:

“Jose gained a self-confidence that allowed him to be more aware of his surroundings and peers.”
“…enabled him to make friends”
“…empowering for him”
Teacher Comments

Positive effects?  Negative effects?

Jose

“…overall self-confidence was raised dramatically. I’m very pleased with his growth.”

Peer

“…learned friendshipping skills, responsibility and was helpful.”
Teacher Comments

“Jose was so motivated by this. This is a boy who came to me so shy and used to people ignoring him. He really blossomed into a more confident student in all areas because he now had a friend.”
Social Validity: Student

Question
Liked the program…
I would do the program again…
I would do the program again even without a reward
Program helped me do better at managing what I say and do
Program helped me get more work done
Liked having a partner…
Student Comments

Liked best?
“"I liked making partners. Having a partner helped me get 150 points."”

Didn’t like?
“"I didn’t like when Centers were finished because I wanted to do Centers forever to work harder."”
Social Validity: Peer Partner

Do it again?
☆ Yes
Without rewards?
☆ Yes
Helped Jose do better in class?
☆ Yes

Best thing?
☆ Helping and trading points
Hardest thing?
☆ Nothing
Implications for Future Research & Limitations

- FBA
- “Packaged” intervention component analysis
- Identification and treatment of internalizing behaviors in school settings
- Use of peers
- Social validity
Modifying Socially Withdrawn Behavior: A Playground Intervention for Students with Internalizing Behaviors
Purpose of the Study

To examine the effects of social skills instruction, peer mediation, and self-management paired with a reinforcement system strategies on the social interaction behavior of 1st and 5th grade children identified with socially withdrawn behavior.
Identifying Internalizers

- SSBD
- School Service Team
- Observation, ISSC/PKBS, Teacher Interview
Participants

Children

- 2 males and 1 female
- 1 First grader
- 2 Fifth graders
- Ages 7 and 11

Peer Mediators

Adult Mediators
Settings

Playground (Lunch Recess)
- Playground equipment
- Two grassy fields
- Basketball hoops
- Four square boxes
Dependent Variables: Positive Social Interaction

Appropriate Peer Play
When the internalizer is participating appropriately in a game or activity with another child while following the playground rules.

Effective Communication
When the internalizer engages in social signals to another peer. Communication is recorded when the internalizer makes appropriate verbal statements or physical gestures (while maintaining eye contact).
Positive Social Interactions...Continued

Participation

🌟 Playground Rules:

1. Follow rules of game
2. Use equipment in safe way
3. Everyone can play
4. Keep hands and feet to yourself
5. Use kind words
Independent Variables

- Social Skill Instruction (Direct Teaching)
  - How to talk to others
  - How to play appropriately
- Peer and Adult Mediation
- Daily and Weekly Goals
- Daily Reminder of Definitions
  (playing and talking to others)
- Token Economy
- Self-management program
Peer/Adult Matching

How many times did my peer communicate with others?
Goal: 50 Total: 83

Did my peer play with others the whole time?
Goal: 3 Total: 4

Self-Management

1) How many times did I communicate with others?

2) Did I play with others the whole time?

One EXTRA point if any matches are the same.
Experimental Design

Multiple baseline across participants
Results

1st Grade Girl
Results

5th Grade Boy
Results

5th Grade Boy
Reliability

- 52% of all sessions
- Mean = 92%
- Range = 82%-98%
Findings from the Study

- Treatment package influenced an increase of positive social interactions.
- Anecdotal evidence indicates that students’ social behavior and self-esteem increased at home as well as at school.
Implications for Future Research

Needs for…

- A methodological approach to selecting peers for peer mediation.
- Peer mediation (pairing internalizers together)
- Collaboratively designing playground interventions that are acceptable and practical to school staff and internalizing students.
- Exploring classroom interventions for students with internalizing behavior problems.
Social Validity (teacher/peer)

Social Validity Questionnaire (Teacher)

Teacher: ___________________________  Date: __________

1. The self-management program for this student was practical and feasible to implement.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

2. If I had a student with a similar problem I would recommend this self-management program again.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

3. The self-management program helped the student's behavior in the classroom improve.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

4. According to your awareness self-management program improved the student's social behavior on the playground.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

5. If there were additional positive or negative effects to the student, what were they?

6. Using a peer partner was beneficial to the student.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

7. I would use a peer partner again to help other students.
   - Strongly Agree  - Agree  - Undecided  - Disagree  - Strongly Disagree

8. If there were positive or negative effects to the peer, what were they?

Social Validity Questionnaire (Peer)

Student: ___________________________  Date: __________

Interviewer: ________________________

1. I liked being a partner.
   - 😊😊😊

2. I would like to be a partner again.
   - 😊😊😊

3. I would be a partner again even if I did not get a reward.
   - 😊😊😊

4. I helped my partner talk and play more.
   - 😊😊😊

5. What do you think was the best thing about being a partner?
   - 

6. What do you think was the hardest thing about being a partner?
   - 

Comments:

Social Validity (Participant)

Social Validity Questionnaire

(Student) (Participant)

1. I liked the program with the shaker, the card, and a partner.

2. I would do the program again if a teacher wanted me to.

3. I would do the program again even if I did not get a reward.

4. The program helped me to speak and play more with others.

5. The program helped me like school more.

6. I liked having a partner help me.

7. What did you like best about the program?

8. Was there anything you didn’t like about the program?

Comments:
Results from Questionnaires

- Teachers, peer partners, and internalizing students were positive in regards to the effectiveness of the intervention procedures.
- The teachers responded affirmatively to the screening and assessment process of identifying the internalizing students.
- Not all peers enjoyed playing with their internalizing partner.
- Internalizing students and peer partners felt the social skills instruction along with the peer monitoring system increased positive social behavior on the playground.
Anecdotal Data

- “For the first time my daughter has made friends with the neighborhood kids!”
  - Mother of a participant
- “….now recess is fun because I have friends”
  - An internalizing student
- “He talks a lot more and he is pretty cool.”
  - A peer participant
- “What happened? It is like he is a new student!”
  - A teacher of one the internalizing students
- “At the beginning of the year, he would not talk to me, and now he feels comfortable to ask me questions.”
  - A teacher of on the internalizing student
Effects of the Strong Kids Curriculum on Students At-Risk for Internalizing Disorders
Research Question

What are the effects of the *Strong Kids* curriculum on the social/emotional symptoms and knowledge of 3rd to 5th grade students identified as at-risk for internalizing disorders?
Setting

Three elementary schools in two central Utah districts all using school-wide PBS
Participants

- 22 students in 3rd – 5th grade

Selection

1. Systematic Screening for Behavior Disorders (SSBD) (Walker & Severson, 1992)
2. Recommendation by the school behavior team
Participants Continued

- BYU PBS Initiative Staff
- School Psychologists
- Teachers
Data Collection

- Quasi-experimental design
- Data was collected **pre, post** and **follow-up**
  - 10 item ISSC
  - 20 item *Strong Kids* Knowledge Test
  - TRF
Treatment

Instruction of the *Strong Kids* curriculum

- 12 partially scripted lessons
- 45-50 minutes each
- Twice/week for 6 weeks

Topics covered

- Emotional strength training
- Understanding your feelings and other’s feelings
- Dealing with anger,
- Thinking clearly and positively
- Resolving conflict
- Letting go of stress
- Setting goals
- Finishing up
TRF Internalizing Results

Normalized T Scores

63.71
62.36
56.95

Internalizing

Int Pre-test
Int Post-test
Int Follow-up
TRF Externalizing Results

- Ext Pre-test: 60.08
- Ext Post-test: 59
- Ext Follow-up: 56.05

Normalized T Scores
TRF Total Problem Results

Normalized T Scores

- Tot Pre-test: 63.75
- Tot Post-test: 62.45
- Tot Follow-up: 59.05
## T-test Comparison of TRF Means

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mean Difference</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
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<tr>
<td><strong>Internalizing Problems</strong></td>
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<tr>
<td>Pre-test and Post-test</td>
<td>.90</td>
<td>6.49</td>
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<td>6.50</td>
<td>5.77</td>
<td>1.29</td>
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<td>5.39</td>
<td>1.20</td>
<td>3.94***</td>
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<tr>
<td><strong>Externalizing Problems</strong></td>
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<td>Pre-test and Post-test</td>
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<td><strong>Total Problems</strong></td>
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<td>3.66</td>
<td>.82</td>
<td>4.04***</td>
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*Note.* 95% Confidence Interval *p*.05, **p*.01, ***p*.001
Externalizing
Knowledge Test Results
## ISSC & Knowledge t-test Comparisons

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<tr>
<th>Measures</th>
<th>Mean Difference</th>
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<tr>
<td>Pre-test and Post-test</td>
<td>1.71</td>
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<td>2.72</td>
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*Note.* 95% Confidence Interval *p*<.05, **p**<.01, ***p***<.001
SSBD vs. Recommended Participants

More statistically significant changes in those identified by SSBD

Only statistically significant change in group of recommended students was in knowledge gains
## SSBD vs. Recommended

<table>
<thead>
<tr>
<th>SSBD Participants</th>
<th>Pre-test Mean Scores</th>
<th>Recommended Participants</th>
<th>Pre-test Mean Scores</th>
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<td>ISSC</td>
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<tr>
<td>Total</td>
<td>67.92</td>
<td>Total</td>
<td>59.58</td>
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SSBD vs. Recommended

SSBD Participants

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Recommended Participants

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Note. 95% Confidence Interval *p<.05, **p<.01, ***p<.001
Social Validity: Teachers

- 89% reported a need for social-emotional training in schools today
- 67% reported having students with internalizing problems in their classes
Perceptions of Outcomes

Reported decreased problem behaviors

- Teachers = 72%
- Students = 43%
<table>
<thead>
<tr>
<th>Students</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ Feel more relaxed</td>
<td>♦ Handles frustration slightly better</td>
</tr>
<tr>
<td>♦ Know more about my feelings</td>
<td>♦ Sadness is gone</td>
</tr>
<tr>
<td>♦ Listen better</td>
<td>♦ Handles emotional situations with friends better</td>
</tr>
<tr>
<td>♦ Know better how to solve problems</td>
<td>♦ Seems to communicate with me better</td>
</tr>
<tr>
<td>♦ Can calm myself down</td>
<td>♦ Interacts with the teacher a little more</td>
</tr>
<tr>
<td>♦ Participate more in class</td>
<td>♦ A little less over-reacting emotionally</td>
</tr>
<tr>
<td>♦ Increased interactions with teachers</td>
<td>♦ Seems to be raising his hand more to answer questions in</td>
</tr>
<tr>
<td>♦ Can talk to other people about my feelings</td>
<td>♦ class</td>
</tr>
<tr>
<td>♦ Asking more questions in class</td>
<td>♦ Will come and talk to me</td>
</tr>
<tr>
<td></td>
<td>♦ During group work, she has shown more initiative</td>
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</table>
Instructors Perceptions

- 83% rated program as fairly or highly effective
- Most important topics
  1. Clear thinking
  2. Understanding your feelings
  3. Dealing with anger
  4. Solving people problems
Conclusions

Use of Strong Kids with elementary students at-risk for internalizing behavior problems appears effective:

• decreased self & teacher rated symptoms
• increased knowledge
• positive teacher and student perceptions
• gains maintained at follow-up

More research needed


http://education.byu.edu/pbsi/documents/apbs_interventions_internalizers.pdf