The Effects of Strong Start on Second Grader’s Social and Emotional Competence

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Overview

- Social and Emotional Competence
- Mental Health Problems in Schools
- Social and Emotional Learning (SEL)
- Strong Start Intervention*
- Study procedures
- Results
- Limitations
- Recommendations
Social and Emotional Competence

- Positive social interactions
- Responsible actions
- Problem solving abilities
Social and Emotional Competence

~Relationships
~Academics
~Behavior
Social and Emotional Problems

- **Externalizing**
  - Aggression
  - Anger
  - Irritability
  - Defiance

- **Internalizing**
  - Depression
  - Anxiety
  - Shyness
  - Sadness
Social and Emotional Problems

**Contributors:**

- Biological  
  (prematurity)
- Family  
  (dysfunction)
- School  
  (poor attachment)
- Cultural  
  (poverty)
Mental Health in Schools

- 20% students in need of services
  - Only 5% receive services

- Demands on school personnel
  - Insufficient resources, overworked
  - Limited time, academic requirements
Social Emotional Learning (SEL)

Promotes resilience by teaching social & emotional skills to:

- Recognize and manage emotions
- Develop caring and concern for others
- Make responsible decisions
- Establish positive relationships
- Handle challenging situations effectively
Numerous SEL Programs

• Vary in focus, mode of instruction, time, resources required, and cost
• Preschool to high school
• Prevention and intervention
• Individual, small, and large group settings
• All students
Intervention - Strong Kids

- Strong Start (K-2)
  - Ages 5-8

- Strong Kids (3-5)
  - Ages 8-12

- Strong Kids (6-8)
  - Ages 12-14

- Strong Teens (9-12)
  - Ages 14-18
Intervention - *Strong Start*

- Direct Instruction
- Discussions
- Guided/Independent Practice
- Children’s Literature
- Activities
Strong Start Lessons

• Good vs. Bad Feelings
• Understanding: Angry, Happy, Sad, Worried, Scared
• How to Appropriately Express Feelings

• Understanding Others’ Feelings
• Being a Good Friend
• Solving People Problems
Research Questions

- Do children in Grade 2 who participate in Strong Start
  - Show an increase in prosocial behaviors?
  - Show a decrease in internalizing and externalizing behaviors?

- Do children at greater risk show greater changes?

- Do participating students and teachers find the Strong Start curriculum to be socially valid?
Setting and Participants

- Elementary School
  in Utah
  - 502 students
  - 87% Caucasian,
    10% Hispanic,
    3% Other
  - 31% low SES

- Two 2nd grade classrooms
  - 52 students
  - 2 teachers

- Strong Start Instructor
Pretest-Posttest Control Group Design

Classrooms were randomly assigned to either the treatment or the control condition.
Procedures

1. Pre-test
2. 10 *Strong Start* lessons
3. Treatment Fidelity
4. Post-test
5. Social Validity
Treatment Fidelity

How:
• Direct Observation
  Checklist of all lessons

Results:
• 95% of all lesson components implemented
Measures

Teacher Report

• *Externalizing and Internalizing* subscales from the Social Skills Rating System (SSRS)

• *Peer Relations* subscale from the School Social Behavior Skills (SSBS)
Data Analysis

- Descriptive Statistics
  - means and standard deviations
- T-tests
  - dependent (within group) means
  - independent (between groups) means
- Cohen’s $d$ effect size estimates
Treatment/Control Group Comparison

SSRS Internalizing Subscale

<table>
<thead>
<tr>
<th>Mean Raw Scores</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>▲</td>
<td>△</td>
</tr>
<tr>
<td>Control</td>
<td>○</td>
<td>□</td>
</tr>
</tbody>
</table>

Note. Higher scores indicate more internalizing symptoms reported.
Treatment/Control Group Comparison

**SSBS Peer Relations Subscale**

- **Treatment**
- **Control**

**Note.** Higher scores indicate more pro-social behaviors reported.
Treatment/Control Group Comparison

SSRS-Externalizing

Mean Raw Score

Pretest Posttest

Note. Higher scores indicate more externalizing symptoms reported.
Table 1

Pretest Posttest Raw Score Comparisons of Treatment and Control Group

| Measure | Pretest | | Posttest | | | | |
|---------|---------|---|--------|---|----|----|
|         | M      | SD | M      | SD | d  | t   |
| SSBS    |        |    |        |    |    |    |
| Treatment | 47.71  | 14.39 | 55.58  | 12.44 | .59 <sup>b</sup> | 4.70*** |
| Control  | 48.72  | 13.17 | 45.48  | 10.31 | .27 <sup>c</sup> | -3.34** |
| SSRS-I  |        |    |        |    |    |    |
| Treatment | 10.96  | 6.44 | 9.00   | 3.31 | .38 <sup>c</sup> | -2.23* |
| Control  | 10.72  | 3.65 | 14.20  | 2.53 | 1.12 <sup>a</sup> | 6.25*** |
| SSRS-E  |        |    |        |    |    |    |
| Treatment | 8.88   | 4.32 | 8.79   | 5.04 | .02 | - .24 |
| Control  | 7.96   | 4.23 | 8.36   | 3.44 | .10 | 1.51 |

*<sup>p</sup><.05, **<sup>p</sup><.01, ***<sup>p</sup><.001, effect size
At-Risk Students

Treatment Group

• Five students
• SSBS: Pretest scores in the “at-risk” category
• SSRS: Also scored in the highest 20% on either the Internalizing or Externalizing subscale.
Treatment Group: At-risk Compared to Low-risk

SSRS Internalizing Subscale

Raw Mean Scores

Note. Higher scores indicate more internalizing symptoms reported.
Treatment Group:
At-risk Compared to Low-risk

SSBS Peer Relations Subscale

Note. Higher scores indicate more pro-social behaviors reported.
Table 2

*Pretest Posttest Raw Score Comparisons of At-Risk and Average Students*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>d</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
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<td>27.20</td>
<td>5.02</td>
<td>43.20</td>
<td>11.92</td>
<td>1.75&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>Average</td>
<td>53.11</td>
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<td>58.84</td>
<td>10.61</td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.78&lt;sup&gt;***&lt;/sup&gt;</td>
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<td>At-risk</td>
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<td>13.20</td>
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<tr>
<td>At-risk</td>
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<td>6.27</td>
<td>9.01</td>
<td>7.05</td>
<td>-.21&lt;sup&gt;c&lt;/sup&gt;</td>
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<tr>
<td>Average</td>
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<td>3.78</td>
<td>8.63</td>
<td>4.61</td>
<td>-.04</td>
<td>-.43</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001, effect size (d): a = large, b = medium, c = small*
Social Validity Results

• Teacher Rating Score: 82/90 = 91%
  – High level of satisfaction with *Strong Start*

• Teacher Comments
  – Well structured lessons
  – Complemented state’s 2nd grade social studies curriculum
  – Wished lessons were implemented earlier in the year
  – Lessons seemed too long
  – Strength of lessons: recognizing and managing emotions
    “He has come a long way. He wouldn’t even read out loud to me at first.”
Social Validity Results

- **Student Ratings:**
  - Positive: 74%
  - Neutral: 14%
  - Negative: 12%

- **Student Comments**
  - “She taught us about feelings.”
  - “It was hard to just sit there.”
  - “I could not talk a lot.”
  - I liked …
  - “to learn to be kind.”
  - “being able to know how other people feel.”
Limitations

- Students not randomly assigned
- Teachers not blind to treatment condition
- Measures (not full scales)
- Sample size and limited diversity
- Not taught by classroom teacher
Recommendations

• Include additional raters
• Larger, more diverse sample
• Other grade levels (Kindergarten and 1st)
• Classroom teacher as instructor
• Booster lessons and follow up post-tests
• Variations to curriculum (divided, shorter lessons)
Conclusion

*Strong Start* showed promising results as a way to reduce internalizing symptoms and increase peer-related prosocial behaviors of second grade students ... particularly for students at greater risk.
http://education.byu.edu/pbsi/

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