

**Predictors and Outcomes
Related to Implementation of
*Steps to Respect: A Bullying Prevention
Program*[®]**

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Anti-Bullying initiatives in the news

- “Putting a stop to bullying is a responsibility we all share.” –President Obama
- Parent Teacher Association campaign to get anti-bullying literature to parents
- MTV coalition to fight cyber-bullying
- Facebook expanding reporting system for bullying



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A Bullying Prevention Program



School Bullying

- Common and persistent across cultures and grade levels (Jimerson, Swearer, & Espelage, 2010).
- Nearly 30% of 6th – 10th grade students reported moderate to frequent involvement in bullying (Nansel et al., 2001)
 - 13% reported involvement as bully perpetrator
 - 10.6% identified themselves as bully victim
 - 6.3% reported themselves as perpetrator-victim
- Only approximately 1 in 5 students **denied** participating in any bullying behavior in the previous 30 days (Espelage, Bosworth, & Simon, 2002).



School Bullying

- Victims report:
 - Greater loneliness
 - Lower self-esteem
 - Greater depression
 - Lower academic achievement
 - Greater suicidal ideation

(Glew et al., 2005; Hawker & Boulton, 2000; Kaltiala-Heino et al., 2000; Kochenderfer & Ladd, 1996; Nasel et al., 2001; Olweus, 1992; Rigby, 2001)



School Bullying Prevention Programs

- Most evaluations showed negligible or negative results (Smith et al., 2004).
- Majority of studies did not show positive effects, but there is hope (Vreeman & Carroll, 2007).
- Meta-analysis showed about one-third of outcomes had positive effects (Merrell et al., 2008).
- “Overall, school-based bullying prevention programs are effective in reducing bullying” BUT were mostly effective in Europe and did not use experimental designs (Farrington & Ttofi, 2009).
- Ryan and Smith (2009) review of 31 published studies found deficiencies in specification of intervention components, design, statistical analysis, measurement, and program implementation.



Steps To Respect: A Bullying Prevention Program

Original Study Purpose: To assess the efficacy of the STR program in preventing bullying and bullying-related behaviors among elementary school children using a rigorous school-randomized design.

- Build upon prior evaluation of STR (Frey et al., 2005).



***Steps to Respect* Program Components**

- **School-wide and Parent components**
 - **Program Guide**
 - Develop an anti-bullying policy
 - Gain staff buy-in
 - Implementation information
 - **Staff Training**
 - **Parent Materials**
 - Annual letter from principal
 - Parent night materials
 - Parent handouts



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***Steps to Respect* Program Components**

- **Classroom-based components (3rd-6th grades)**
 - **11 Skills Lessons** that focus on:
 - Friendship skills
 - Recognizing bullying
 - Refusing and reporting bullying
 - Bystander skills
 - **Literature Lessons:**
 - Reinforces STR concepts while addressing language arts objectives



Study Design

School-randomized controlled trial

- 33 elementary schools in Northern California matched on key demographic variables
- Randomized to intervention or wait-listed control
- Selected four 3rd-5th grade classrooms to implement curriculum
- One-year, pre-post data collection from school staff, teachers, and students
- Only use $n = 17$ experimental schools for implementation analyses



Study Participants

Teachers (N = 128)

- $N = 128$ Teachers ($n = 65$ in intervention schools)
 - 41% 3rd-grade
 - 48% 4th-grade
 - 9% 5th-grade
 - < 1% 3rd/4th-grade split
 - < 1% 4th/5th-grade split



Study Design

Participants

- $N = 2,940$ Students ($n = 1,424$ in intervention schools)
 - 94% of target population
 - 51% Male
 - 52% White
 - 42% Hispanic
 - 6% Asian
 - 35% Other race/ethnicity
 - Age range = 7 to 11 years



Study Design

Measures

– Student Survey

- ❖ Paper and pencil survey administered in class.
- ❖ Based on the Colorado Trust's Bullying Prevention Initiative Student Survey (Csuti, 2008).
- ❖ 13 measures (Mean alpha = .79, range = .68 to .87)



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Student Survey Measures

- Student Support
- Student Attitudes Against Bullying
- Student Attitudes Toward Bullying Intervention
- **Teacher/Staff Bullying Prevention (+)**
- **Student Bullying Intervention (+)**
- **Teacher/Staff Bullying Intervention (+)**
- **Positive Bystander Behavior (+)**
- School Bullying as a Problem
- Bullying Perpetration
- Bullying Victimization
- **Student Climate (+)**
- School Connectedness
- Staff Climate

Note: Bolded outcomes indicate significant ($p < .05$) intervention effects.



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Secondary Research Question:

To examine the predictors of and outcomes from program implementation in intervention schools...

...incorporating the nested design of the original efficacy study.



Teacher Program Implementation Log

- 11 weekly online reports of classroom curricula
- TPIL based on earlier study of STR Program efficacy (Frey et al., 2005) and implementation (Hirschstein et al., 2006).
- Analyses excluded teachers who did not complete at least 60% of classroom lessons.



Teacher Program Implementation Log Measures

Exposure

- Average of the percentages of students exposed to each lesson ($n = 59$ teachers).

0 = less than 50%	→	2% of teachers
1 = 50 to 75%	→	4% of teachers
2 = 76 to 94%	→	20% of teacher
3 = 95 to 100%	→	74% of teachers



Teacher Program Implementation Log Measures

Engagement

- Average of four items averaged across all lessons ($n = 59$ teachers).
- Mean = 2.34, SD = 0.40

	Not at All (0)	A little (1)	Some (2)	A lot (3)
To what extent were your students engaged by this lesson (e.g., asking questions, volunteering)?				
To what extent were students distracting other students during this lesson? (e.g., horsing around, being goofy, off-task)				
To what extent do you feel your students could demonstrate the objectives of this lesson?				
How difficult was it to manage students during this lesson?				



Teacher Program Implementation Log Measures

Fidelity

- Average of the percentages of a sample of lesson activities implemented across Lessons 4 through 11 ($n = 54$ teachers).
- For example (Lesson #2):
 - ✓ Reviewed the definition of "respect"
 - ✓ Showed the video: *Connect with Respect—“Finding Friends”*
 - ✓ Had students read Student Handout 1: *Identify the Problem*
 - ✓ Gave students Family Handout 2: *Conflict between Friends*
- Mean % of lesson activities = 92% (SD = .14)
- 67% of teachers did all lesson activities; 96% did > 50%.



NCES data on school characteristics

- Percentage of students eligible for free or reduced-price lunch
- Percentage of students by race/ethnicity
- Percentage of ESL students
- Total number of students enrolled
- Total number of teachers



Hierarchical Linear Model for Predictors of Program Implementation

Level 1 (Teacher)

$$\text{ENGAGEMENT} = \beta_0 + \beta_1(\text{BULLY VICTIM}_1) + \beta_2(\text{BULLY PERP}_1) + \beta_3(\text{SCHOOL CLIMATE}_1) + \dots + e$$

Level 2 (School)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\text{BULLY VICTIM}_1) + \gamma_{01}(\text{BULLY PERP}_1) + \gamma_{02}(\text{SCHOOL CLIMATE}_1) + \gamma_{03}(\text{PCTFRL}) + \dots + r_0$$



Results

Proportion of variation across schools

- i.e., unconditional school-level intraclass correlation coefficients

- ❖ Exposure: 9%

- ❖ Engagement: 11%

- ❖ Fidelity: 0%

- However, all school-level variation nonsignificant.



Results

Predictors of Program Implementation

❖ Exposure:

- Classroom Level:
 - Student Support (+)
 - Student Bullying Intervention (+)
- School Level:
 - Percentage of students receiving FRL (-)



Results

Predictors of Program Implementation

❖ Engagement:

- Classroom Level:
 - Student Climate (+)
 - School Connectedness (+)
 - Staff Climate (+)
 - Student Attitudes Against Bullying (+)
- School Level:
 - School Bullying as a Problem (-)
 - Percentage of students receiving FRL (-)



Results

Predictors of Program Implementation

❖ Fidelity:

- Classroom Level:
 - No significant predictors
- School Level:
 - No significant predictors



Hierarchical Linear Model for Program Implementation on student post-test outcomes

Level 1 (Student)

$$\text{BULLY PERP}_2 = \beta_0 + \beta_1(\text{AGE}) + \beta_2(\text{SEX}) + \beta_3(\text{WHITE}) + \beta_4(\text{HISP}) + \beta_5(\text{AGE}) + \beta_6(\text{BULLY PERP}_1) + \dots + e$$

Level 2 (Teacher)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\text{ENGAGEMENT}) + r_0$$

Level 3 (School)

$$\gamma_{00} = \xi_{000} + \xi_{001}(\text{FRL}) + u_{00}$$



Results

Outcomes related to Program Implementation

❖ Exposure:

- School Bullying as a Problem (-)
- Student Attitudes Toward Bullying Intervention (+)
- Student Bullying Intervention (+)
- Bullying Victimization (-)



Results

Outcomes related to Program Implementation

❖ Engagement:

- Student Support (+)
- Student Attitudes Against Bullying (+)
- Student Attitudes Toward Bullying Intervention (+)
- Bullying Victimization (-)
- Student Climate (+)
- School Connectedness (+)



Results


Outcomes related to Program Implementation

- ❖ Fidelity:
 - Student Support (+)



Summary

- Significant intervention effects in original efficacy trial.
- Implementation analyses show school culture and SES to be important in getting to Exposure and Engagement (nothing for Fidelity)
- Higher levels of Exposure and Engagement predicted multiple positive outcomes, but evidence weak for Fidelity.



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Future Directions

- Program Implementation measures as mediators of outcomes?
- Program Implementation measures as moderators of outcome?



Summary

- **Notable differences between students and staff in perceptions of:**
 - Likelihood of Student/Staff Bullying Intervention
 - Student Climate
 - School Bullying-Related Problems



Summary

- **Significant intervention effects found in all three respondents:**
 - School Staff Report: 5 out of 6 (83%)
 - Teacher Report: 2 out of 5 (40%)
 - Student Report: 5 out of 13 (38%)
 - Overall: 12 out of 24 (50%)



- Additional analyses using data from Frey et al. 2005 indicated that intervention students had lower levels of observed bullying victimization at posttest that did control students, but only for students with supportive friends (Low, Frey, & Brockman, 2010).



Study Design

- **Participants**
 - 33 elementary schools
 - ❖ in 4 counties in northern, central California
 - ❖ Average *N* of students = 479 (range = 77 to 749)
 - ❖ Average *N* of teachers = 24
 - ❖ Average 40% of students receiving FRL



Study Participants

- **School Staff**

- All paid and volunteer staff (e.g., administrators, teachers, paraprofessionals, support staff, custodial and cafeteria personnel, bus drivers)
- *Ns* = 1,307 (pretest) and 1,296 (posttest)
- 77% of target population
- 90% female
- 12% Hispanic
- 88% White
- Average age = 46 years
- Worked at school median = 3 to 5 years



Results

- **School Staff**

- School Anti-Bullying Policies and Strategies (+)
- Student Bullying Intervention (+)
- Staff Bullying Intervention
- **Student Climate (+)**
- **Staff Climate (+)**
- **School Bullying-Related Problems (-)**

❖ Average $d = .296$ (range = $.212$ for Staff Climate to $.382$ for Anti-Bullying Policies and Strategies).

Note: Bolded outcomes indicate significant ($p < .05$) intervention effects.



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Results

- **Teachers**
 - **Social Competency (+)**
 - Academic Competency
 - Academic Achievement
 - **Physical Bullying Perpetration (-)**
 - Non-Physical Bullying Perpetration
- ❖ $d = .131$ for Social Competency
- ❖ AOR = .609 for Physical Bullying Perpetration

Note: Bolded outcomes indicate significant ($p < .05$) intervention effects.