Final Summary Overview: Impact Evaluation of No Bully System

Thomas Hanson, Jo Ann Izu, Trevor Fronius, and Anthony Petrosino

Contact

Thomas Hanson

Project Director, Health & Justice

WestEd

4665 Lampson Avenue

Los Alamitos, CA   90720

Date: February 28, 2019

WestEd
WestEd.org

Table of Contents

WestEd

Bullying affects large numbers of U.S. students in elementary schools and is associated with short and long-term harms for both victims and bullies. Although prevention is critical, schools also need effective interventions for dealing with bullying once it occurs. Funded by the National Institute of Justice and in collaboration with the Oakland Unified School District and No Bully, WestEd conducted a two-year study of the impacts of the No Bully System (NBS) - a promising set of interventions designed to activate adult and peer support systems within the school for the targets of bullying – using a cluster randomized experimental design involving 24 elementary schools. No Bully trains staff to prevent and interrupt student harassment and bullying and ensure school-wide anti-bullying policies are in place. The core component of NBS is the Solution Team where a trained adult facilitator (Solution Coach) brings together a group of 6-8 students (Solution Team) that includes the bully or bullies, bystanders and pro-social peers, and leads the team through a series of three brief meetings to end the bullying of one of their peers by cultivating empathy and developing peer-driven solutions. The target is not included in the initial meetings though s/he is invited to attend the final session.

STUDY PURPOSE

Student bullying in elementary through high school is a widespread problem in the United States. Between 30% to 45% of youth experience bullying in their peer group, either as a victim, bully, or both, and most of this bullying occurs in schools (Kasen, Berenson, Cohen, & Johnson, 2004; Dinkes & Baum, 2009; Nansel et al., 2001). It has also been found that the majority of bullying goes unreported to teachers or adults at school (Petrosino, Guckenberg, DeVoe, & Hanson, 2010). Moreover, chronic victimization (occurring two or more times per month) is estimated to occur at a rate of 15% to 20% (Sawyer, Bradshaw, & O'Brennan, 2008). Although bullying is pervasive across all grades, some research indicates it is even more common amongst elementary school students. For example, Tarshis and Huffman (2007) reported that nine of ten elementary school age children (from two schools in California and one in Arizona) reported being bullied, and six in ten reported taking part in bullying behaviors. California Healthy Kid Survey (CHKS) statewide aggregate data for 2015-2011 indicate that about 15% of grade 5 students report that other kids at their school spread mean rumors or lies about them "most of the time" or "all of the time."

Bullying can also affect overall school climate, leading to students feeling unsafe and unsupported, which can negatively impact overall student learning (e.g., Limber and Nation, 1998). Compared to other groups, disengagement and low sense of school belonging are highest among students involved in peer victimization (Glew, Fan, Katon, Rivara, & Kernic, 2005; Juvoven, Graham, & Schuster, 2003; Ma, 2002). School districts are now increasingly faced with litigation over ignored or downplayed incidents of bullying, such as the $4.2 million settlement by the Ramsey, New Jersey school district to the victim of a bully who threw a punch that led to victim paralysis (Associated Press, 2012). Given the widespread occurrence of bullying and its harmful effects on both the victim and bully, it is no surprise that major public policy has been enacted across the U.S. to address it. As of 2013, 49 states have now passed anti-bullying legislation that requires school districts to adopt an anti-bullying policy, a plan to respond to student bullying, and mandatory reporting.

Yet despite the attention on bullying, many teachers and other school staff believe they are ill prepared to cope with it. In fact, when compared to student reports, teachers tend to underestimate the prevalence of bullying at their schools and the severity of incidents (for review, see Holt & Keyes,

2004). While systematic research on how schools and districts typically handle bullying incidents is not available, anecdotal evidence from school administrators and teachers suggest that broad guidelines for addressing bullying are typically contained in district discipline policies and student behavior codes, but specific definitions for bullying or criteria for determining which sanctions to apply are not always clear, and may differ even across schools within a district.

The purpose of this study is to conduct an evaluation that will add to the literature on promising anti-bullying programs that improve school safety and climate, reduce bullying, and improve outcomes for the targets of bullying. This randomized controlled trial provides the first rigorous test of the No Bully System to determine if its promise holds up in a rigorous evaluation. The study is designed to address the following research questions: 1) Does NBS reduce the recurrence of bullying perpetration and victimization among students involved in incidents targeted by Solution Teams? 2) Does NBS reduce bullying perpetration and victimization among students at risk of bullying involvement (victims and perpetrators)? 3) Does NBS improve perceptions of school safety, peer support, and other indicators of school climate among all students in schools?

Specifically, the findings presented address the questions below:

1. Do the victims of bullying who participate in Solution Teams experience reductions in the frequency and intensity of bullying, and improvement in their perceptions of safety at school?

2. For students at high risk of bully involvement (perpetration or victimization), does NBS reduce bullying perpetration and victimization?

3. For all students, does NBS improve school safety, peer support, and other indicators of school climate?

THE NO BULLY SYSTEM (NBS) INTERVENTION

No Bully is a San Francisco-based non-profit organization, founded in 2003, that has been working to develop effective, low-cost, long-term solutions to school bullying. A non-punitive approach, the NBS is a set of interventions that is designed to systematically activate the peer and adult support systems within the school for the targets of bullying. Key participants, training components, and time allotments are shown in table 1 and briefly described below.

Table 1: No Bully System Training

Participants	Training Components
All school staff	3-hour basic foundational training
Parents & Guardians	90-minute workshop
School Leadership Team	Three 2-hour coaching sessions (with activities between sessions)
Solution Coaches (selected staff)	Year 1: One day training with half day follow-up
	Year 2: Half day refresher training

Schoolwide Supports: Prevent and interrupt. All campus staff participate in a 3-hour foundational training designed to help staff recognize, prevent and interrupt student harassment and bullying. Parent and guardians are encouraged to attend a 90-minute workshop on bullying and cyberbullying, and what they can do to prevent bullying. Over the course of a year, the principal/school leaders are led through a series of three 2-hour coaching sessions to ensure that schools have a common vision, policies and consistent procedures in place to respond to aggression or harassment and bullying. These trainings are

WestEd

designed to establish a shared vision around bullying, and schoolwide supports to prevent bullying and harassment.

Peer Supports: Intervene by holding a Solution Team facilitated by a Solution Coach. A small number of selected staff and/or teachers are trained to become Solution Coaches in a full day training session with a half day follow-up session to deepen their skills. In year two a half-day refresher training is typically provided.

Targeted Supports: Referrals by Solution Coach. Solution Coaches are also trained to refer students to school or external resources when such students are particularly "entrenched" in the role of bully or target. (The developer estimates that this occurs in about 10% of all Solution Teams.)

In this multi-tiered system of supports, Solution Coaches and Solution Teams are the core intervention. In a Solution Team, a trained adult (Solution Coach) brings together a group of 6-8 students (Solution Team) comprising the bully or bullies, bystanders and pro-social peers, and leads the team through a series of three brief meetings to end the bullying of one of their peers (target) by cultivating empathy and developing peer-driven solutions. The target is NOT included in the first two meetings but is invited to the last meeting to share his/her experiences and acknowledge the positive actions of team members. In addition to the three meetings that are completed over a 2-3 week period, the Solution Team process also includes the Solution Coach assessing the incident with the target, identifying an appropriate team, and checking in with the target after the first two meetings, and again three months later. The entire process (initial assessment, three meetings and check-ins, and follow-up) takes about 2-2.5 hours to complete.
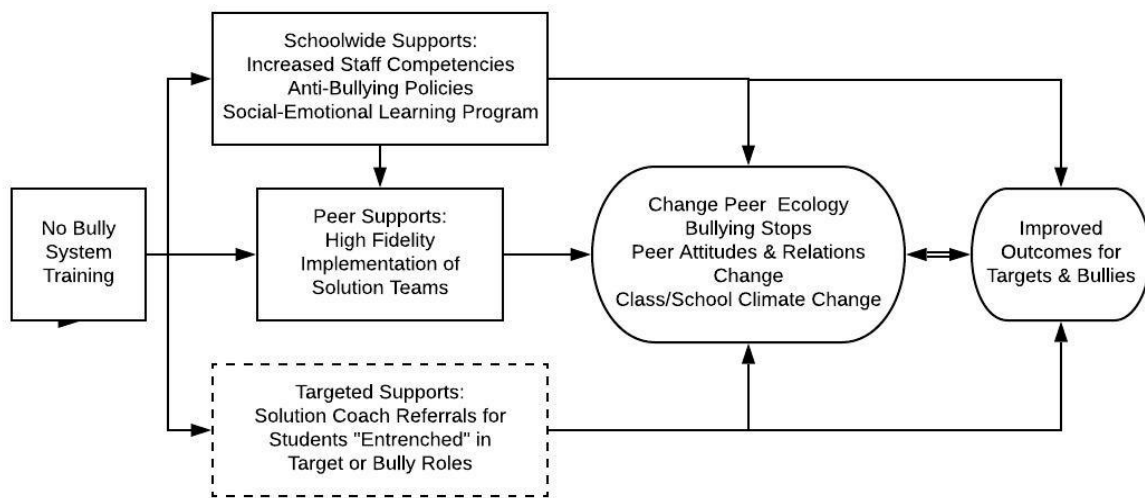
Conceptual Underpinnings: NBS and Solution Team Process

The NBS is based in part on social ecological theory. Bullying prevention and intervention strategies that are based on a social-ecological model aim to bolster the peer group's understanding of involved students' (perpetrators and targets) needs and to increase peers' willingness to include involved youth in future pro-social experiences. These types of interventions are meant to "begin awareness building to infuse new ideas, understandings, and personal connections across people and systems" (Hazler & Carney, 2011, p. 361). Empathy, which is fundamental to future willingness to intervene in incidents of bullying, is cultivated through these types of intervention experiences (Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Henderson, 2010). Research suggests that children often lack empathy for the victims of bullying, and that they view the target as being the cause of bullying because s/he is different in some way from the school's norm (Swearer & Cary, 2007).

Like other strategies based on a social-ecological model, the Solution Team process aims to alter group dynamics and peer team member behaviors. Peers are often present as bystanders during most bullying episodes and play a pivotal role in either the prevention or promotion of bullying (Storey, Slaby, Adler, Minotti, & Katz, 2008). When active bystanders were asked why they chose to intervene, they were likely to attribute feelings of empathy for the victim and concern for the well-being of others as motivating factors. Bystanders are also more likely to intervene when they have positive attitudes towards the target (Rigby & Johnson, 2006).

The theory of change underlying the NBS intervention that guided this study is depicted in figure 1.

WestEd

Figure 1: NBS Theory of Change

Training for all staff, parents and the leadership team enhance existing schoolwide supports (such as school policies on bullying and referral procedures) and likely influence how bullying incidents are resolved. Requiring all staff and parents to participate in training not only increase staff competencies to recognize and address bullying, but builds school capacity to intervene consistently to prevent and reduce bullying. Also, increased competency to recognize and appropriately address bullying early, and knowledge of available actions – both expected results of training – are expected to increase referrals to appropriate supports, including Solution Teams, and in the long-term, reduce bullying.

When Solution Teams facilitated by a trained adult (Solution Coach) are implemented with fidelity, group dynamics and behaviors of peer team members are altered. Initial Solution Team discussions aim to bolster the peer groups' understanding of the targets' needs, thereby cultivating empathy. By taking both individual and group responsibility for implementing solutions, the balance of power shifts from the bully to the peer support group. This is postulated to lead to increased willingness on the part of Solution Team members to include former targets of bullying in future pro-social experiences and to intervene to stop bullying incidents. These changes are expected to help reduce, and in some cases stop, subsequent bullying of the target.

All of these supports, including targeted support for targets and bullies entrenched in their roles, may also influence school climate and student outcomes, especially those of the target and bully. Perceptions of safety and school connectedness, for example, may change over time as more referrals and Solution Teams are conducted. When the needs of bullying and target students are met, we also expect that their levels of connectedness to school will be enhanced. Improvements in target or bully social and emotional skills (an expected result of appropriate referrals) may also influence peer ecology (e.g., how accepted they are by their peers). In turn, the reduction or elimination of bullying behavior and changes in peer support and/or school climate are related to improvements in outcomes for the targets of bullying.

Potential harmful effects for peer-facilitated programs. Research indicates that bringing peers together can also have harmful effects, particularly when pro-social and anti-social youth are combined in groups (e.g., Dishion and Dodge, 2005 describe the potential of peer contagion). According to the developer of the

WestEd

No Bully System, negative consequences are uncommon, with most bully perpetrators in the intervention group offering solutions. The No Bully System has several safeguards to prevent potential harmful effects, including explicit training of Solution Coaches, follow-up sessions with targets to determine if the situation has improved or worsened from the victim's perspective, and Solution Team reconfiguration if team members do not act upon solutions or the target believes the situation has worsened. The proposed study will be able to assess potential harmful and beneficial impacts of the NBS.

PROJECT DESIGN AND METHODS

To examine the impact of NBS, this study used a cluster randomized experimental design involving 24 elementary schools served by Oakland Unified School District (OUSD). In the Summer of 2015, schools were randomly assigned to either an experimental group or a wait-listed control group—with 12 schools per group. Prior to randomization, we took into account not only school size and student demographics, but similar programs we felt could influence results. Therefore, the sample was stratified by types of school-wide programming being implemented (no program, Positive Behavior Intervention and Supports, Social-Emotional Learning programs. Restorative Practice, or a combination of 2 or more of these programs). Due to constant turnover in the district and the importance of leadership in the NBS framework, we took into account leadership turnover by also stratifying schools with new principals and particular programs into two additional strata.

Treatment schools began implementing NBS in Fall 2015 and continued to do so until the end of the second academic year in Spring 2017. During the same time-period, control schools conducted business as usual (e.g., continued to address bullying as they usually do/had done in the past). In OUSD, there is a system in place for reporting bullying incidents that is part of "business as usual." A form describing the incident can be completed by parents, school staff or administration, and students, and submitted to the principal. Once submitted, schools must respond to the incident with a course of action within two weeks. Anecdotal evidence from several study principals suggests that in practice the system is used by schools primarily for reporting serious or high-profile bullying incidents. Specific protocols and procedures for reporting other types of bullying incidents vary by school.

SUBJECTS

The first question focuses only on victims of bullying in treatment elementary schools who participated in Solution Teams. Research questions 2 and 3, which utilize an experimental design, provide a more rigorous test of the impact of NBS. Grade 3-5 elementary students identified prior to program implementation as being at high-risk of bullying perpetration or victimization in both treatment and control schools are the subjects for research question 2. Finally, all grade 3-5 students in study elementary schools are the focus for research question 3.

DATA SOURCES & MEASURES

To examine the first research question, data come from Solution Team Logs that Solution Coaches completed as required by the NBS program. In addition to capturing program fidelity information (i.e., how closely Solution Coaches followed the suggested process), the logs contain questions that the Solution Coaches ask the victim of bullying about the frequency, intensity and perceptions of school
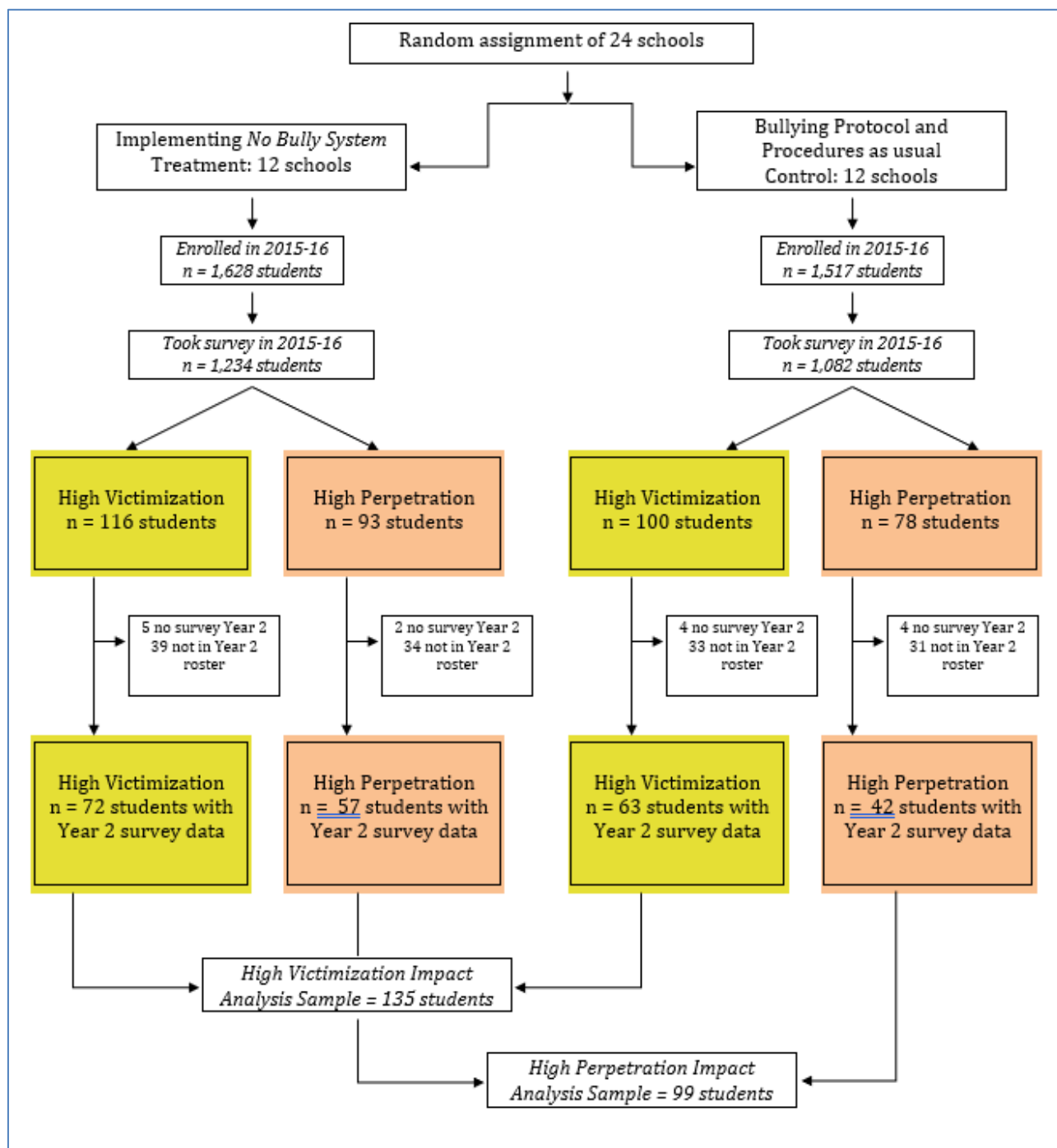
WestEd

safety[1] at four timepoints: 1) initial assessment prior to a Solution team (pre-intervention), 2) after the first Solution Team meeting (during intervention), 3) near the end of the Solution Team (2-3 weeks later, or at the end of the Solution Team intervention), and 4) two to three months after a Solution Team has been completed (post-intervention). Victims of bullying who agreed to participate in Solution Teams (n=83) comprise the analytic sample.

Research questions two and three rely on self-report survey data collected from participating grade 4-5 students at two time points: in the Fall or Spring of the 2015/16 academic year and in the Spring of the 2016/17 academic year, the second year of implementation. Research question 3 relies on self-report survey data collected from all grade 3-5 students in the Spring of the 2016/17 academic year.

For the second research question, to measure bullying perpetration and victimization, we used the 22-item Peer Interactions in Primary School Questionnaire (PIPS, Tarshis & Huffman, 2007). Designed for children 8-12, the PIPS is comprised of two subscales that assess bullying perpetration (e.g., "I call other students bad names") and victimization (e.g., "I am hit or kicked by other students"). Students identified as being at high risk of bullying involvement comprise the analytic samples. Using baseline data for the sample of participating grade 3-4 students who have both a pre- and post-measure (n=2,316), we created a victimization scale and a perpetration scale using items from the PIPS. We defined two distinct subsamples: a sample of students at high risk of being bullying victims and a sample of students at high risk of being perpetrators. To identify the first subsample, we selected students whose victimization scores were in the top 5% (n=226). To identify students in the second sample, we selected student in the top 5% on the perpetration scale (n=171). Approximately one-third of students identified as high risk at pretest did not participate in the posttest survey, primarily because they transferred out of the study schools in Year 2. A consort map depicting the number of potential study participants at the start of trial (enrolled in study schools in academic year 2015/16) and their survey status through data collection to the analytic sample is shown in figure 2.

---

[1] The questions are: 1) Over the past 7 days, how many days have you been bullied (from 0 to 7 days); 2) On a scale of 1 to 10, with ten being "very bad," how bad is the bullying; and 3) How safe do you feel when you are at school? (very unsafe, unsafe, neither safe nor unsafe, safe, very safe).

Figure 2: No Bully System Consort Map – High Victimization/Perpetration Student Samples

For research question three, measures of school safety and school climate come from a number of sources. In addition to the victimization (VICTIM) and perpetration (PERPET) subscales from the PIPS described above, the following measures were included:

Social-emotional learning supports (SEL): A three item measure from the elementary version of the California Healthy Kids Survey is used to measure social-emotional skills/competence.

WestEd

School connectedness (CONNECT): A school connectedness scale (alpha=.79), modified from the scale used in National Longitudinal Study of Adolescent Health (McNeely, Nonnemaker & Blu, 2002). This is constructed from responses to four statements, including the question "Do you feel like you are a part of this school?". It uses a five-point Likert-type scale with response options range from "strongly agree" to "strongly disagree".

Student Voice Opportunities (VOICE): Taken from the elementary version of the California Healthy Kids Survey, this three-item measure assesses student opportunities for meaningful participation or student voice in school.
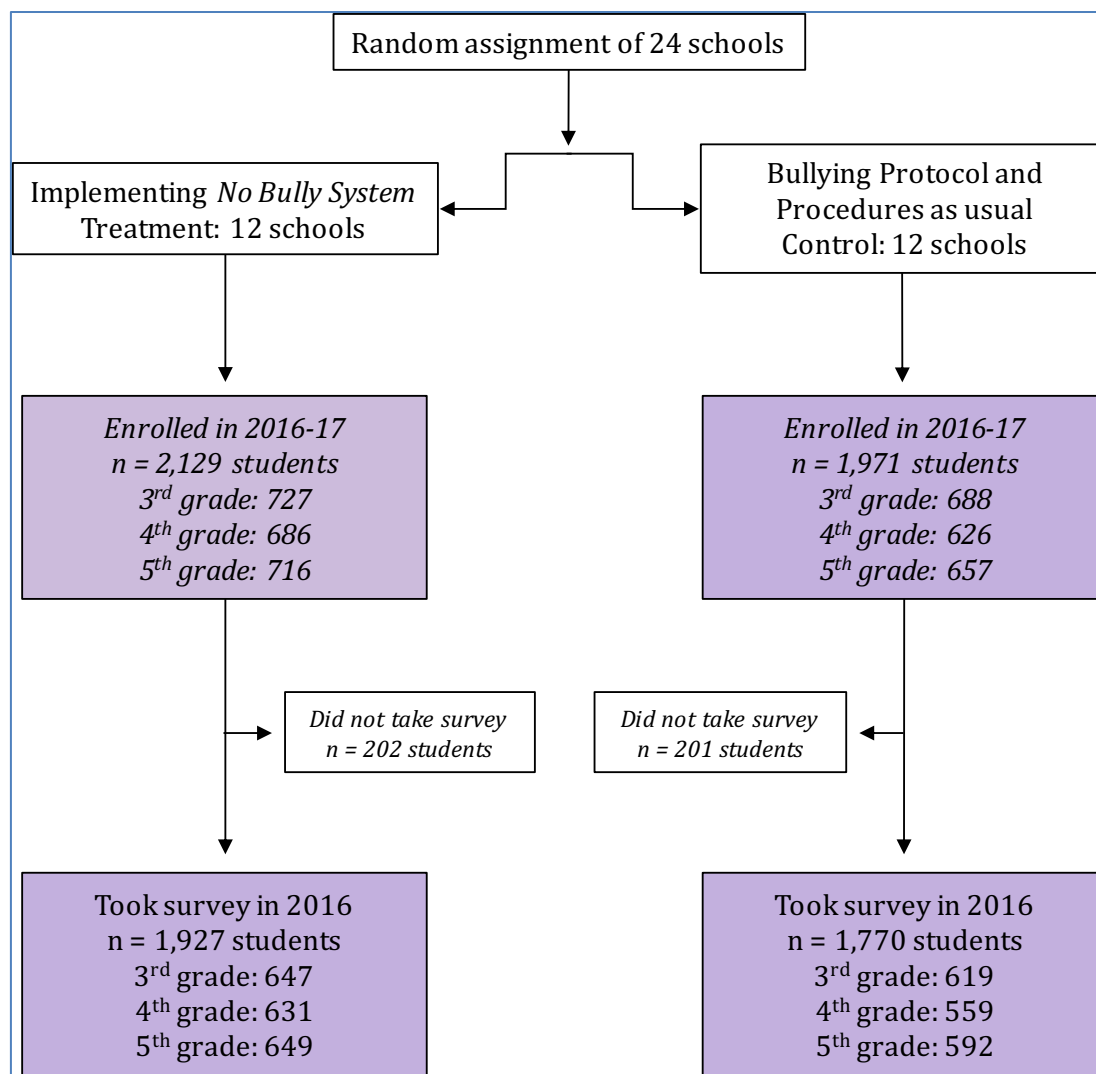
Empathy (EMPATHY): A two-item measure of student empathy (alpha=.85) from the California Healthy Kids Survey Core Module for elementary students is used (Hanson and Kim, 2007)

Peer Support (PEER-TRUST). Williams and Guerra's (2007) 6-item scale is used to assess perceived peer support (alpha=.79). The scale captures both positive and negative qualities of peers as a source of social support (e.g., "Students my age: really care about what happens to me, can be trusted a lot, only think about themselves.").

Bullying Bystander Behavior (JOIN, INTERVENE. STUDENT ANTI, and TEACH ANTI): Student perceptions of bullying bystander behavior are assessed using Williams and Guerra's (2007) measure (e.g., "Students at your school would help out if a student is spreading rumors and lies about another student behind their back"). The scale assesses perceptions of both student and teacher behavior in response to observed bullying. Factor analyses revealed two sub-scales: a five-item measure assessing how frequently students join in with others to bully a student labelled as JOIN. A two-item measure, INTERVENE, assesses how frequently students intervene to help a student who is being bullied. We also use Williams and Guerra's (2007) six-item measure of informal social control that captures both student and teacher willingness to "help out" a student who is being bullied. Factor analyses suggested two sub-scales, a three-item student anti-bullying measure (STUDENT ANTI) and a three-item teacher anti-bullying measure (TEACH-ANTI).

The analytic sample used to address research question 3 includes all grade 3-5 students who participated in the Year 2 survey (see figure 2). A total of 4,100 grade 3-5 students were enrolled in participating schools in Year 2, and 3,697 enrolled students participated in the Year 2 survey. Survey participation rates were similar in treatment (90.5%) and control schools (89.8%).

WestEd

Figure 3: No Bully System Consort Map – Schoolwide Impact Analytic Sample

ANALYSIS

For research question 1, to assess impact of Solution Teams, we examined differences in means (average scores) at different timepoints for bullying frequency and intensity, and perceptions of school safety measures.

For research question 2, we conducted two analyses. To estimate impacts on victimization, we used the high-risk victimization subsample to estimate treatment/control differences in Year 2 victimization according to the PIPS. To estimate impacts on perpetration, we used the high-risk perpetration subsample to estimate treatment/control difference in Year 2 perpetration according to the PIPS. Multilevel regression models were used to assess impacts.

The following type of two-level hierarchical linear model was estimated to examine the impact of the No Bully System on bullying victimization and perpetration:

$$Victimization_{ij} = \alpha_0 + \beta_1 PreVictimization_{ij} + \beta_2 Tx_j + \sum \beta_I I_{ij} + \tau_j + \varepsilon_{ij}, \qquad [1]$$

where subscripts *i* and *j* denote student and school, respectively; *Victimization* represents the PIP bully victimization scale, measured at Year 2; *PreVictimization* represents the baseline measure of the outcome measure; *Tx* is a dichotomous variable indicating student attendance at the school assigned to the treatment condition; and *I* is a vector of other control variables for students, measured prior to exposure to the intervention (gender, grade, and semester that pretest survey was administered). Randomization strata were not included in the models to maximize degrees of freedom. Lastly. τ_j represents a random variable for schools (clustering groups) and ε_{ij} is an error term for individual sample members. In this model, the intervention effect is represented by β_2, which captures treatment/control school differences in changes in the outcome variable between pretest and posttest. and τ_{jk} captures random effects (intercepts) of school, which account for the positive intraclass correlations in the data. A model analogous to [1] was estimated to examine the impacts of the No Bully System on Perpetration

Research question 3 focuses on potential impacts of the No Bully System on school safety, peer support, and other indicators of school climate among all grade 3-5 students in participating schools. We estimated the following type of two-level hierarchical linear model:

$$Safety_{ij} = \alpha_0 + \beta_1 PreSafety_j + \beta_2 Tx_j + \sum \beta_I I_{ij} + \sum \beta_S S_j + \tau_j + \varepsilon_{ij}, \qquad [2]$$

where the *Safety* represents the a single-item assessing perceptions of school safety in Year 2 for student *i* in school *j*, *PreSafety* represents the average of students' reports safety perceptions in Year 1, *Tx* is a dichotomous variable indicating student attendance at the school assigned to the treatment condition; *I* is a vector of control variables for students measured in Year 2 (gender, grade, and race/ethnicity), and S is a vector of control variables for schools measured in Year 1 (average school connectedness and perceptions of bystander behavior (INTERVENE, TEACHER ANTI, and STUDENT ANTI). These particular school-level covariates are included in the model to account for baseline differences between treatment and control schools. Because [2] does not include baseline student-level covariates, students need not have taken the Year 1 survey to be included in the analytic sample.

IMPLEMENTATION OF THE NO BULLY SYSTEM

A highly diverse (both ethnically and economically) set of schools participated in the study; and not surprisingly, we found tremendous variation in the implementation of the NBS intervention overall, and the implementation of Solution Teams, specifically. Two key aspects of the context – unstable environments and co-location of two schools in a single physical location – may have influenced implementation.

Unstable environments. High turnover among district leadership characterized the period during which this study was conducted. For example, the district experienced four superintendents during the three-year study period with subsequent changes in programming and support priorities for schools. As well, fiscal issues continued to plague the district that had an influence on supports for schools.

Similarly, some schools experienced constant changes in leadership. Among treatment schools, for example, from June 2015 when schools were randomized into treatment and control groups to August 2015 when the school year (and implementation) began, a third (n=8) of study schools had new principals, and 5 of 8 were new to the principal role. At the start of the second year of implementation,

another third of study principals were also new. Within our sample of 12 treatment schools, two schools had a new principal each year of this study. Staff turnover was also high in a smaller subset of schools. In four (or one-third) of treatment schools, teacher turnover from one year to the next ranged from one-quarter to one-half of the teacher staff.

<u>Co-located schools</u>. In part due to OUSD's small school policy, there are a number of sites in our study where two schools are located on a single physical site (that may have been one school at a previous time). These co-located schools share playground, cafeteria and large group meeting spaces, and on occasion, support staff such as restorative justice coordinators/specialists. Four treatment schools, and one control school in our study shared their site with another school in a range of different pairings. One control and one treatment school shared their site with another school not participating in the study. Two treatment schools shared a single physical site. One treatment school shared a site with a control school. Finally, one treatment school moved to share a site with a middle school for the second year of implementation.

<u>Implementation fidelity.</u> To assess fidelity, we examined three main factors: 1) the extent to which schools completed all four training modules (the all staff foundational training, Solution Coach basic and advanced training, three leadership coaching sessions, and the parent workshop), 2) the number of Solution Teams conducted, and 3) the level of principal involvement in the intervention (participation in foundational training, Solution Coach training, and at least two of the three leadership sessions). Completing all training sessions, especially the leadership coaching, is an indicator that some schoolwide supports for bullying were being put into place. For example, the leadership coaching sessions required that additional activities be completed between sessions such as establishing a social vision for a bully-free environment and developing a schoolwide bullying policy and plan. According to No Bully, conducting Solution Teams well takes practice; so Solution Coaches who complete both the basic and advanced training and the number of Solution Teams they conduct give Solution Coaches the knowledge and experience they need.

Information from training attendance records and completed Solution Team logs are summarized and presented in Table 2 below. Of note, leadership coaching consisted of three sessions.

We found by the end of the first year five schools could be considered implementing with fidelity – i.e., all training was completed with leadership participation in training. The No Bully developers indicated generally 5-10 Solution Teams are completed a year in elementary schools. Due to the delayed start in training for some schools, schools that conducted at least two Solution Teams are considered implementing with fidelity. Two schools did not start implementation in the first year (highlighted n red).   Both had new, first-time principals who started their positions within three weeks of the start of school. In one of these schools, more than two-thirds of staff were new and half of these were emergency credentialed. The other school was relatively large and catered to new immigrant children and families. Partial implementation characterized the remaining five schools. While staff in most schools had completed basic Foundational and Solution Coach training, completion of coaching sessions that address schoolwide supports was limited and principals were less actively involved. Anecdotal evidence suggests principals found leadership coaching sessions challenging for two main reasons. Some principals indicated the time required to complete activities related to the three 2-hour coaching sessions made it difficult for them to continue. Others found that these planning activities duplicated or overlapped with other district required plans and activities which took precedence. The exception is School H that implemented well in the first semester, but the principal left abruptly during the second semester; as a result, principal involvement and support for NBS declined suddenly.

WestEd

Table 2. Year 1 Implementation

	Completion of Training					Solution Teams	Principal Involvement		
	All Staff Foundational	Parent Workshop	Basic Solution Coaching	Advanced Solution Coaching	Coaching Sessions	Number	Foundational	Solution Coach Training	Leadership Coaching
School A	✓		✓		1	0	✓		
School B	✓		✓		0	0	✓		
School C	✓	✓	✓	✓	3	5	✓		✓
School D	✓	✓	✓	✓	3	2	✓	✓	✓
School E					0	0			
School F	✓	✓	✓	✓	3	5	✓	✓	✓
School G	✓	✓	✓	✓	2	0	✓		
School H	✓	✓	✓	✓	3	6	✓		
School I	✓	✓	✓	✓	3	2	✓	✓	✓
School J					0	0			
School K	Partial	✓	✓	✓	3	7	✓	✓	✓
School L	✓		✓	✓		0			

By year two, most schools completed the foundational, parent, and basic Solution Coach training. Only one school failed to implement the intervention (highlighted in red). While the principal allowed a junior staff member to be trained as a Solution Coach, she felt other priorities needed to be implemented first; therefore none of the training for schoolwide supports was implemented.

Of note, by the end of the second implementation year only one school could be considered continuing to implement with fidelity. This is in large part due to changes in staffing. For three of the four schools previously implementing well, new principals (most new to the position as well) started the second year. As a result, principal knowledge and involvement in the intervention was limited.

WestEd

Table 3: Year 2 Implementation

	Completion of Training					Solution Teams Yr 1&2	Principal Involvement			Leadership & Staff Turnover			
	All Staff Foundational	Parent Workshop	Basic Solution Coaching	Advanced Solution Coaching	Coaching Sessions	Number	Foundational	Solution Coach	Leadership Coaching	Principal Status, Yr 1	Principal Status, Yr 2	Solution Coach Status Yr 2	Solution Coach Expertise
School A	✓	✓	✓		1	3	✓					new	Novice
School B	✓		✓	✓	0	8	✓						Beginning
School C	✓	✓	✓	✓	3	13				new	new		Advanced
School D	✓	✓	✓		3	2	✓	✓	✓			new	Novice
School E			✓		0	0				new		new	Novice
School F	✓	✓	✓	✓	3	13					new		Expert
School G	✓	✓	✓	✓	2	4	✓					new	Advanced
School H	✓	✓	✓	✓	3	7					new	new	Novice
School I	✓	✓	✓	✓	3	7	✓	✓	✓	new			Expert
School J	✓	✓	✓	✓	1	8	✓			new		new	Advanced
School K	Partial	✓	✓	✓	3	13				new	new		Expert
School L	✓	✓	✓	✓	3	5				new			Beginning

WestEd

As shown in Table 3, leadership and staff turnover was fairly high in the second year of implementation. Four principals (one-third of treatment schools) were new to the school and the principal position. Similarly, half of the Solution Coaches were new in year 2. Two of these schools just started to implement the NBS intervention in year 2. For the remaining four schools, Solution Coaches either moved to another school or district, or to another position in the school that made continuing as a Solution Coach challenging.

To ensure high quality implementation of the intervention, WestEd worked with the district and developer to identify and implement strategies to provide additional support and training. For example, plans were underway to offer foundational training at two schools where teacher turnover was high; but the new principals of these schools elected to wait until a later time. New principals were also offered an opportunity to learn about NBS by attending part of an SC training session in San Francisco, though no new principals elected to do so.

In the second year of implementation, a basic and an advanced training for new Solution Coaches was offered in the district. To accommodate staff who could not attend, No Bully offered six additional trainings (five basic and one advanced) over a four-month period. Solution Coaches also participated in bi-monthly meetings designed to provide support for Solution Teams and data collection (completion of Solution Team logs). These meetings were designed to address common implementation challenges and possible solutions, such as how to conduct Solution Teams with very young children or children with special needs.

Near the end of the second year of implementation (February 2017) we assessed the expertise of Solution Coaches using attendance records and information from Solution Team logs using the following rubric/criteria:

- Novice – Solution Coach (SC) training started or completed (i.e., Basic or Basic and Advanced SC training is complete)
- Beginning – SC training completed & SC started or completed at least one Solution Team as evidenced by a submitted log
- Advanced– training completed, SC completed two or more Solution Teams with documented evidence in ST logs that ST process followed and used for bullying incidents (e.g., were three meetings held?, was the bully included in the team? Did the SC elicit individual actions/solutions from each team member?)
- Expert – training completed, SC complete 8 or more Solution Teams (over the two year implementation period), and SC able to tailor process to specific needs as evidenced in log notes.

Using these criteria, three Solution Coaches were rated as expert, three as advanced, two as beginning and four as novices.

In summary, our key findings related to implementing NBS in the highly impacted, urban context of OUSD include the following:
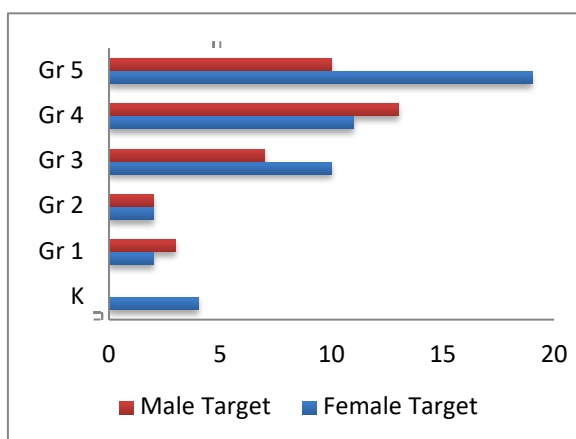
- Implementation of NBS not only varied widely across the treatment schools, but from one year to the next. Maintaining a schoolwide focus was particularly challenging given constant changes in leadership and teaching staff.
- The Solution Team Process could be implemented well, independent of the training (or environments) for schoolwide supports. Solution Coaches, particularly expert ones, were able to continue to conduct Solution Teams. In several schools students familiar with the process would request a team. That said, Solution Coaches with new principals and staff recommended additional training for their schools.
- With additional support and practice, Solution Coaches could get up to speed quickly. Two Solution Coaches who joined the study in year 2 received advanced ratings after only six months.
- Maintaining a system of schoolwide supports (e.g., staff sharing language about bullying and vision of bully-free environments through training and coaching sessions, involved principals) was challenging in schools with high leadership- and staff turnover.

RESULTS

BULLYING INCIDENTS AND SOLUTION TEAMS

Over the two-year period, of the 111 incidents referred to Solution Coaches, 83 Solution Teams were conducted across the 12 schools. More Solution Teams were conducted in the upper grades with more girls experiencing bullying than boys (see figure 4).

Figure 4. Number of Solution Teams Conducted by Grade and Gender (two year implementation period)

Using data from Solution Team Logs that Solution Coaches were required to keep, we examined the types of bullying addressed by Solution Teams. In their initial assessment of the incident, Solution Coaches are asked to classify the type or types of bullying the victim describes as physical, verbal, relational (social exclusion) or cyber-bullying, or some combination of these types.

In their training materials, No Bully defines bullying as "when a student, or group of students, repeatedly target a less powerful student using one or more of the following four categories of behavior:

Physical bullying - when a student uses physical force to hurt another student by hitting, pushing, shoving, kicking, taking a student's belongings or stealing their money.
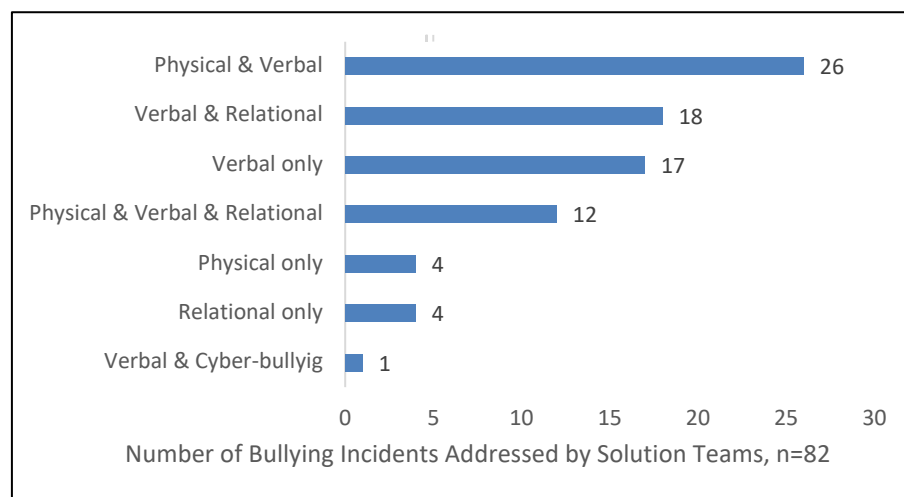
Verbal bullying - when a student uses words or gestures to humiliate another student by threatening, taunting, intimidating, insulting, teasing and/or using sarcasm, name-calling, slurs, graffiti, put-downs or ridicule.

Relational bullying - when a student isolates another student from their peer group through leaving them out, gossiping, spreading rumors and scapegoating.

Cyberbullying - when a student uses a cell-phone, text messages, e-mails, instant messaging, chats and social networking sites to bully another student in any of the ways described above.

As shown in figure 5, while verbal followed by physical bullying are the most common type of bullying, bullying incidents addressed by Solution Teams rarely involve just one type of bullying. Less than one-third of the incidents addressed by Solution Teams involve a single type of bullying. Most of the bullying addressed by Solution Teams involves a combination of physical and verbal bullying (31.3%) or verbal and relational bullying (21.6%). Over the two-year period just one case of cyber-bullying (combined with verbal bullying) was reported. This finding is not surprising since most elementary school students, particularly in this district, do not have access to phones or computers on a regular basis.

Figure 5: Bullying Experience of Targets Participating in Solution Teams

Number of Bullying Incidents Addressed by Solution Teams, n=82

In summary,

- Targets of bullying rarely experience just one type of bullying. More than two-thirds of bullying incidents involve two or more types.

- For targets, it is a matter of intensity or degree, not type, of bullying.

Q1 RESULTS: IMPROVEMENT IN BULLYING EXPERIENCES FOR STUDENTS PARTICIPATING IN SOLUTION TEAMS

To assess the extent to which bullying victimization declined and safety perceptions increased among bully victims targeted by Solution Teams, Solution Team Log data regarding the frequency and intensity of bullying, and improvement in perceptions of school safety were examined. The trend in average scores for the sample of victims who had data at two, three or all four time-points was examined for each of the three outcome measures and are shown in the following graphs.

Time 1 represents the initial assessment that the Solution Coach conducts with the target prior to the start of the Solution Team. If a target consents to a Solution Team and one is conducted, Time 2 represents the check-in meeting that the Solution Coach has with the target after the first Solution Team meeting has been conducted but before the second meeting begins. During this 1-2 week period (Figure 6, green line), Solution Teams members have presumably begun to implement solutions/actions they suggested in the first meeting. Time three represents the completion of the Solution Team process, roughly 2-3 weeks after the incident is referred to the Solution Coach (Figure 6, red line). Time 4 represents the follow-up meeting the Solution Coach has with the target about 2-3 months after a Solution Team has been completed (Figure 6, blue line).[2]
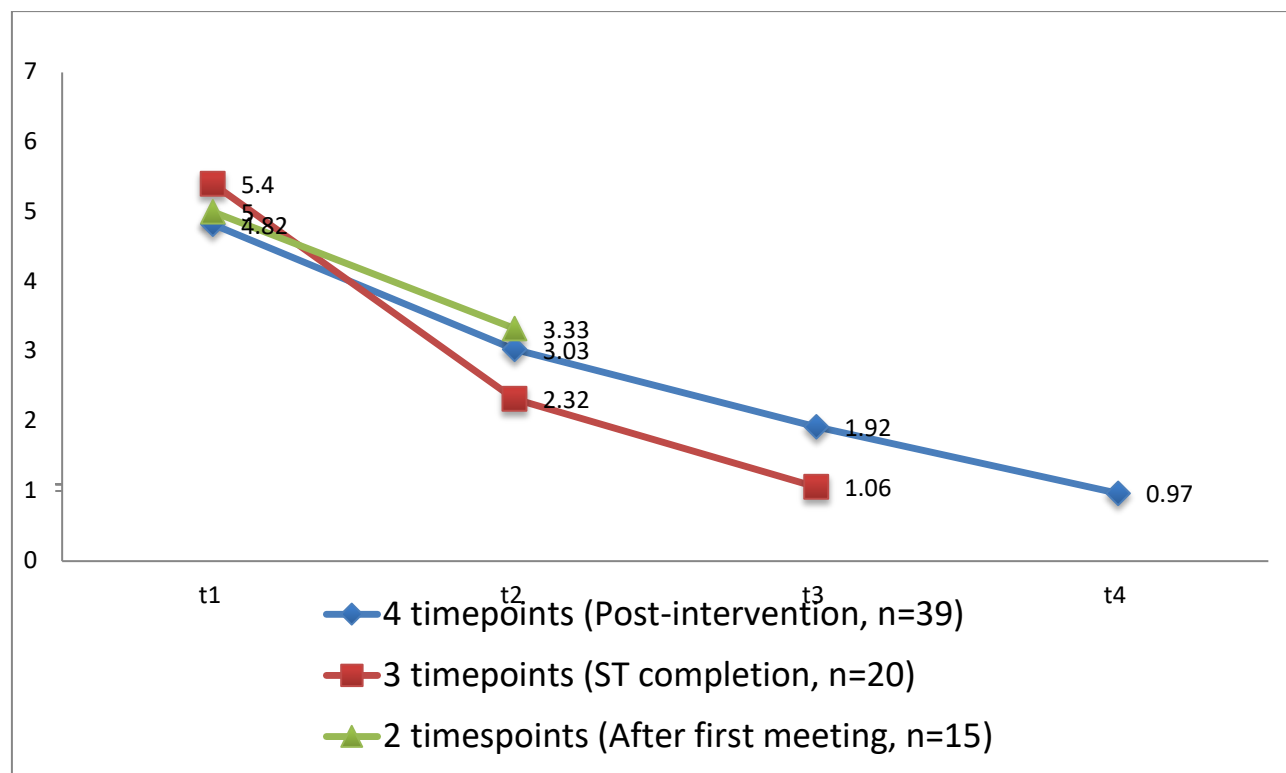
Solution Coaches ask the targets about bullying frequency and severity, and safety at school. The timepoints at which these questions are asked are shown in Table 4 below.

Table 4. Solution Team Log Assessments

Bullying Frequency: Over the past seven days, on how many days have you been bullied? (0-7 days)

Bullying Severity: On a scale of 1-10 with 10 being 'very bad', how bad is the bullying?

School Safety: How safe do you feel when you are at school?" (very unsafe, unsafe, neither safe nor unsafe, safe, and very safe)

t1	Prior to the start of the Solution Team (baseline)
T2	After 1st Solution Team Meeting (1-2 weeks)
T3	At completion of Solution Team process (2-3 weeks)
T4	At follow-up (about 2-3 months after Solution Team ended)

---

[2] Although the protocol called for collecting Solution Team log follow-up data three months after the completion of a Solution Team, Solution Teams conducted in mid-March necessitated collecting data sooner. In some cases, post-intervention Solution Team data were not completed if the follow-up date was near the end of school. This partially accounts for the loss of data between Time 3 and Time 4.

Figure 6: Average number of days target is bullied in a week (unduplicated incidents)
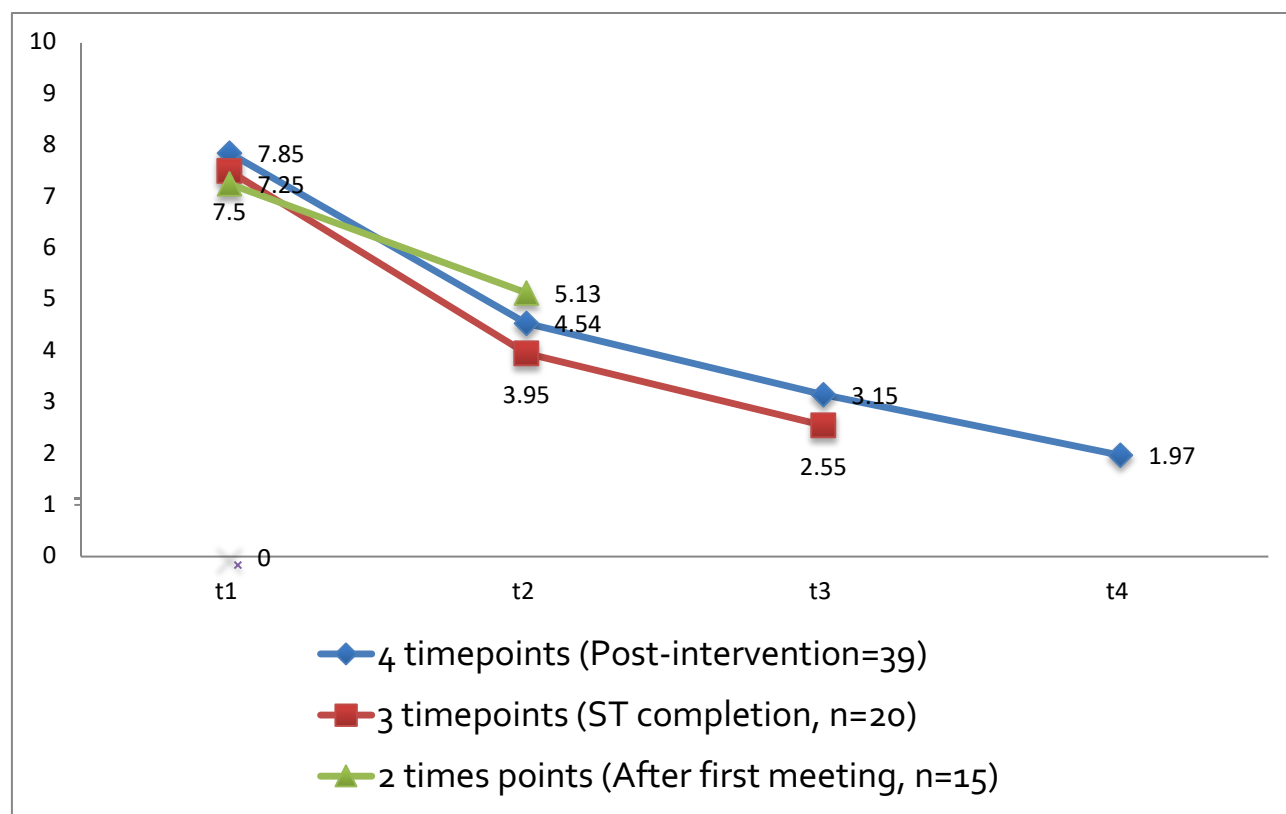

The trend in average scores for the three outcome measures and three time periods are shown in the line graphs in Figures 6-8. The average scores shown in any given line represent unduplicated or discrete incidents. In other words, the 39 targets for whom we had data at all four time points are NOT included in the average scores for the lines representing the other two time periods/groups.

In figure 6, bullying victims targeted by Solution Teams consistently reported that the frequency of bullying declined substantially as the Solution Teams were implemented, and at three months after the last Solution Team meeting. For example, at the outset of the Solution Team process before a meeting is held, the targets report being bullied about 5 days out of the week, on average, or nearly every day at school. By the end of the Solution Team process (t3), targets report that bullying is down to 1-2 days a week. For those 39 targets for whom we have follow-up data, bullying declined down to 1 day a week; about half of these targets report no bullying 2-3 months later during the follow-up.

The pattern of results is similar for bullying severity where we see consistent reductions over time. Bullying victims are asked a self-anchoring "pain gauge" type question typically used in hospitals, "On a scale of 1-10 with 10 being 'very bad', how bad is the bullying?". At the outset, targets rate bullying severity around a 7-8. By the end of the first meeting, targets rate bullying severity at 4-5. By the end of the Solution Team Process, this is down to 2.5-3 and drops to around 2 at check-in 2-3 months after the Solution Team has been completed.

Figure 7: Severity of Bullying (unduplicated incidents)

Finally, we examined bullying targets' perceptions of safety at school. During the initial assessment the Solution Coach asks the target, "How safe do you feel when you are at school?" and the response options include "very unsafe, unsafe, neither safe nor unsafe, safe, and very safe". Although changes in average scores are not as dramatic as bullying frequency and severity, there is a consistent and considerable increase in perceptions of school safety over time. At the outset, on average most targets report feeling unsafe to neither safe nor unsafe. But by the end of the Solution Team process, and certainly 2-3 months later, targets report feeling safe.

Figure 8: Perceived safety at school (unduplicated incidents)

Figure 8: Perceived safety at school (unduplicated incidents)

Chart showing three lines across timepoints t1-t4:
- 4 timepoints (Post-intervention=39): 2.89 (t1), 3.49 (t2), 3.79 (t3), 4.10 (t4)
- 3 timepoints (ST completion, n=20): 2.75 (t1), 3.6 (t2), 3.84 (t3)
- 2 times points (After first meeting, n=15): 2.75 (t1), 3.17 (t2)

Q2 RESULTS: IMPACTS OF NBS ON STUDENTS AT HIGH RISK OF BULLYING PERPETRATION OR VICTIMIZATION

Research question 2, which was examined experimentally, focused on potential intervention impacts on grade 4-5 students at high risk of bullying perpetration and victimization when they were in grades 3-4. The impact analysis results are shown in table 1.

Students in intervention schools who were at high risk of being bully victims at baseline exhibited substantial reductions in victimization compared to their counterparts in control schools. No Bully was associated with a 0.37 standard deviation reduction in victimization among this group (which, all things being equal, would approximate a 30% reduction in victimization rates for the treatment group compared to the control group).

No discernable impacts of NBS were detected on bullying perpetration among students identified as being at high risk of perpetration at baseline. Although the estimates in Table 5 suggests that NBS was associated with increases in perpetration among students at high risk of perpetration, the results are not statistically significant.

WestEd

Table 5. NBS impacts on students at high risk of bullying victimization and perpetration

Impact measure	Adjusted means					
	Intervention (standard deviation)	Control (standard deviation)	Difference (standard error)	*p*-value	Effect size	Student sample size
High Risk at baseline						
Victimization	1.928 (0.556)	2.110 (0.485)	-0.182* (0.090)	0.045	-0.376	135
Perpetration	1.675 (0.523)	1.570 (0.445)	0.105 (0.101)	0.299	0.236	97

Note: Data are regression-adjusted using multilevel regression models to account for differences in baseline characteristics. Covariates in the models include baseline measures of the outcome variables, gender, and grade. Effect sizes were calculated by dividing impact estimates by the control group standard deviation of the outcome variable.

Q3 RESULTS: IMPACTS OF NBS ON ALL STUDENTS IN PARTICIPATING SCHOOLS

Research question 3 examines potential school-wide intervention impacts on all students in grades 3-5 after 18 months of NBS implementation. The impact analysis results are shown in Table 6. No impacts of NBS were detected on the measures of school safety (safety perceptions, bullying victimization, bullying perpetration), student supports (knowledge of where to go to get help, social emotional learning supports, peer trust), student empathy, student voice, or bystander behavior (joining in bullying, intervening in bullying, student anti-bully behavior, teacher anti-bully behavior). The results therefore do not support the hypothesis that NBS improves school safety, peer support, and other indicators of school climate for all students in participating schools.

WestEd

Table 6. NBS impacts on all students

Impact measure	Adjusted means		Difference (standard error)	p-value	Effect size	Student sample size
	Intervention (standard deviation)	Control (standard deviation)				
Safety						
Safety Perceptions	3.012 (0.991)	2.978 (0.991)	0.034	0.635	0.034	3,639
Victimization	1.614 (0.470)	1.615 (0.463)	-0.001	0.971	-0.002	3,685
Perpetration	1.253 (0.364)	1.255 (0.359)	-0.002	0.914	-0.006	3,681
Student Supports						
Knowledge of Supports	3.373 (0.876)	3.391 (0.895)	-0.018	0.761	-0.020	3,644
SEL Supports	3.807 (0.818)	3.786 (0.799)	0.021	0.718	0.026	3,644
Peer Trust	2.683 (0.640)	2.668 (0.625)	0.014	0.645	0.023	3,677
Empathy and Student Voice						
Empathy	2.813 (0.711)	2.755 (0.719)	0.058	0.299	0.081	3,688
Student Voice	2.876 (0.731)	2.849 (0.723)	0.027	0.631	0.037	3,676
Bystander Behavior						
Joining in Bullying	1.216 (0.341)	1.211 (0.335)	0.004	0.819	0.013	3,621
Intervening in Bullying	2.207 (0.613)	2.154 (0.591)	0.053	0.068	0.090	3,612
Student anti-bullying	3.063 (0.772)	3.078 (0.777)	-0.015	0.819	-0.019	3,657
Teacher anti-bullying	2.435 (0.737)	2.360 (0.705)	0.075	0.222	0.106	3,657

Note: Data are regression-adjusted using multilevel regression models to account for differences in baseline characteristics. Covariates in the models include school averages of the outcome variables at baseline, gender, grade, race/ethnicity, and school averages of school connectedness and bystander behavior at baseline. Effect sizes were calculated by dividing impact estimates by the control group standard deviation of the outcome variable.

IMPLICATIONS

The evaluation results indicate that bullying victimization declined and safety perceptions increased among bully victims targeted by NBS Solution Teams. On average, bully victims targeted by NBS Solution Teams reported bullying declines from 5 days per week prior to the implementation of the Solution Team to about 1 day per week 2-to-3 months after the Solution Team intervention was completed.

Moreover, the experimental results indicate that students in intervention schools who were at high risk of being bully victims at baseline exhibited substantial reductions in victimization compared to their counterparts in control schools. NBS was associated with a 30% reduction in victimization rates for the treatment group compared to the control group. However, no discernable impacts of NBS were detected on bullying perpetration among students identified as being at high risk of perpetrating bullying at baseline.

Also, no impacts were detected on school-wide measures of school safety, peer support, and other indicators of school climate for all students in participating schools. Uneven implementation may have had an impact on outcomes, especially on school climate/

Overall, these results suggest that NBS may be an effective tool for responding to bullying incidents and reducing victimization for students at high risk of being bullying targets.

Associated Press. (2012, April 19). New Jersey bully's paralyzing punch nets $4.2M settlement. *New York Daily News*. Retrieved from http://www.nydailynews.com/news/national/new-jersey-bully-paralyzing-punch-nets-4-2m-settlement-article-1.1064125.

Denike, M. (2012). *Evaluation of No Bully Solution Team Training and Implementation in Marin County 2011-2012: A Report to the Lynx Foundation*. San Francisco, CA: Author.

Dinkes, R., Kemp, J., & Baum, K. (2009). *Indicators of School Crime and Safety: 2008* (NCES 2009-022/NCJ 226343). National Center for Education Statistics, Institute of Educational Sciences, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.

Dishion, T.J. and Dodge, K.A. (2005). Peer contagion in interventions for children and adolescents: moving towards an understanding of the ecology and dynamics of change. *Journal of Abnormal Child Psychology,* 33 (3): 395-400.

Glew, G. M., Fan, M., Katon, W., Rivara, F. P., & Kernic, M. A. (2005). Bullying, psychosocial adjustment, and academic performance in elementary school. *Archives of Pediatric and Adolescent Medicine, 159*, 1026-1031.

Hanson, T.L., & Kim, J.O. (2007) *Resilience and youth development: the psychometric properties of the Healthy Kids Survey.* (Issues and Answers Report, REL 2007-No. 034). Washington, D.C.: U.S. Department of Education, Institute of Education Sciences, National Center for Educational Evaluation and Regional Assistance, Regional Educational Laboratory West. **http://ies.edu.gov/ncee/edlabs**

Hazler, R. J., & Carney, J. V. (2011). Critical characteristics of effective bullying prevention programs. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety: international research and practice (2nd Edition)* (pp 357-368). New York: Taylor & Francis.

Holt, M. K., & Keyes, M. A. (2004). Teachers' attitudes toward bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 121–134). Mahwah, NJ: Erlbaum.

Hymel, S., Schonert-Reichl, K. A., Bonanno, R. A., Vaillancourt, T., & Henderson, N. R. (2010). Bullying and morality: Understanding how good kids can behave badly. In S. R. Jimerson, S. M. Swearer, & D. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 101-118). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Juvoven, J., Graham, S., & Schuster, M. A. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics, 112*, 1231-1237.

Kasen, S., Berenson, K., Cohen, P., & Johnson, J. G. (2004). The effects of school climate on changes in aggressive behavior and other behaviors related to bullying. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 187–210). Mahwah, NJ: Erlbaum.

Limber, S. P., & Nation, M. A. (1998). Violence within the neighborhood and community. In P. K. Trickett & C. J. Schellenbach (Eds.), *Violence against children in the family and the community* (pp. 171-193). Washington, DC, US: American Psychological Association.

Ma, X. (2002). Bullying in middle school: Individual and school characteristics of victims and offenders. *School Effectiveness and School Improvement, 13*(1), 63-69.

McNeely, C.A., Nonnemaker, J.M, & Blum R.W. (2002). *Journal of School Health,* 72 (4): 138-146.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simmons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among us youth prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285,* 2094-2100.

Olweus, D. (1992). Bullying among school children: Intervention and prevention. In R. D. Peters, R. J. McMahon, & V. L. Quinsey (Eds), *Aggression and violence throughout the lifespan* (pp. 100-125). London, United Kingdom: Sage Publications.

Petrosino, A., Guckenburg, S., DeVoe, J., & Hanson, T. (2010). *What characteristics of bullying, bullying victims, and schools are associated with increased reporting of bullying to school officials?* (Issues & Answers Report, REL 2010–No. 092). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast and Islands. Retrieved from http://ies.ed.gov/ncee/ edlabs.

Rigby, K., & Johnson, B. (2006). Expressed readiness of Australian schoolchildren to act as bystanders in support of children who are being bullied. *Educational Psychology, 26*, 425–440.

Storey, K., Slaby, R., Adler, M., Minotti, J., & Katz, R. (2008). *Eyes on bullying… what can you do?: A toolkit to prevent bullying in children's lives.* Newton, MA: Education Development Center.

Swearer, S., & Cary, P. (2007). Perceptions and attitudes towards bullying in middle school youth: A developmental examination across the bullying continuum. In J. E. Zins, M. J. Elias, & C. A. Maher (Eds.), *Bullying, victimization and peer harassment* (pp.67-83). New York: Haworth Press.

Tarshis, T. P., & Huffman, L. C. (2007). Psychometric properties of the Peer Interactions in Primary School (PIPS) questionnaire. *Journal of Developmental and Behavioral Pediatrics*, 28, 125–132.

Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. Journal of Adolescent Health, 41, s14–s21.

You, S., Ritchey, K., Furlong, M., Shochet, I., & Boman, P. (2011) Examination of the latent structure of the psychological sense of school membership scale. *Journal of Psychoeducational Assessment, 29*(3): 225-237.

WestEd