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Project SOARS
Student Ownership, Accountability, and Responsibility for School Safety

Final Summary Overview

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ABSTRACT

Project SOARS was embedded within research indicating that (a) peer victimization is often a precursor to violent behavior and disproportionately affects students from vulnerable groups, (b) students resorting to violent behavior tend to share their plans with peers prior to executing them, and (c) students tend to be reluctant to share critical safety information with adults due to fear of punitive consequences from adults and retaliation from peers. In this context, we developed and tested a student-centered and technology-driven comprehensive school safety framework for high schools responsive to these identified challenges. Our project consisted of four phases. Activities for each phase were carried out in Oregon and in Illinois providing for inter-site replications of outcomes. In Phase 1, we conducted two waves of focus groups with 40 high school students, 71 personnel and 40 parents to gather their perceptions of successes and challenges associated with current school safety practices. In Phase 2, we asked 47 students, 64 school personnel and 27 parents to assess acceptability and usability of prototypes of the SOARS framework components. Based on stakeholder feedback, we developed a framework consisting of (a) a mobile app, the *Advocatr*, allowing students to report positive as well as negative behaviors they are aware of in their school environment; (b) a 9-week curriculum engaging students with the concepts of student ownership of school safety, advocacy/self-advocacy, physical and emotional safety, and restorative conflict resolution; (c) informational briefs for school personnel and parents about the framework components and their rationale; and (d) guidelines for a student-led school-wide safety campaign.

In Phase 3 we conducted a feasibility test with 10 teachers and 121 students in those teachers' classrooms. The focus of the feasibility test was on student access and use of the *Advocatr* and the accompanying curriculum. Results indicated that students availed themselves

of the *Advocatr* with more students reporting positive than negative behaviors. Compared to pre, students reported reduced peer victimization at post, increases in personal safety, and reductions in classroom disruptions and major delinquency. Teacher-and parent-reported changes in student behavior were in the desired direction, though not statistically significant. In Phase 4, we conducted a pilot test with four high schools, two assigned to the intervention and two to the control condition. The focus of the pilot test was to test the promise of effectiveness of the entire framework. Results indicated that 1.8-4% of students in the schools in the intervention condition availed themselves of the *Advocatr* to report positive and negative behaviors. Students in the intervention condition also reported greater school connection, less disruption, greater personal safety, and less peer victimization at post compared to students in the control condition. Changes in school personnel's and parents' perception of their school's climate did not show a significant intervention effect.

We discuss these findings in the context of current approaches to school safety, such as state-wide tiplines. Promoting student ownership of school safety, providing students the opportunity to make their voices heard in local contexts, and focusing on safety threats while simultaneously norming prosocial behaviors seems to be associated with reduced peer victimization and greater student willingness to share safety information. Further research is necessary to explore how to address challenges posed by deeply ingrained anti-snitching cultures and school personnel's limited capacity to implement restorative conflict resolution in collaboration with students. Our policy recommendations include a focus on enabling students' voice and restorative conflict resolution in designing and implementing comprehensive school safety frameworks at the high school level.

PURPOSE

Background

The right of students to attend school feeling physically and emotionally safe is undisputed, and the development of practical solutions that address violence in schools remains an urgent necessity. Data from the most recent Youth Risk Behavior Survey (YRBS) conducted in 2017 indicate that 19% of high school students report being bullied at school and 14.9% of students reported being cyberbullied in the past year (Kann et al., 2018). Trends across multiple years of YRBS data indicate that rates of victimization have not changed significantly since 2009 and cyberbullying rates have not changed significantly since 2011.

Based on YRBS data, female and White students were more likely to report being bullied and cyberbullied (Kann et al., 2018). Based on school climate survey data collected in 2017 by the Gay, Lesbian and Straight Education Network (GLSEN), 59.5% of LGBTQ students reported feeling unsafe at school due to their sexual orientation, 70.1% reported verbal harassment, 28.9% reported physical harassment, and 12.4% reported physical assault (Kosciw et al., 2018).

Six percent of students reported being threatened or injured with a weapon at school in 2017, reflecting a downward trend over the last decade (Kann et al., 2018). While school violence is often associated with weapons on school grounds and bodily injury, these data reflect the prevalence of peer victimization as well as its disproportionate distribution across students from various genders, racial backgrounds, and sexual orientations.

The consequences of experiencing victimization range from absenteeism (Kann et al., 2008) and school drop-out (Cornell et al., 2013) to suicidal ideation and suicide attempts (Collier et al., 2013; Geoffrey et al., 2016; Gini & Espelage, 2014; Van Geel et al., 2014), non-suicidal self-injury (Van Geel et al., 2015), depression and social anxiety (Landoll et al., 2015; Stapinski

et al., 2015), and substance abuse (Earnshaw et al., 2017; Huebner et al., 2015). In some cases, peer victimization has been associated with violent, revenge-driven behavior directed towards individual students or entire school communities (Bradshaw et al., 2008; Lankford, 2015; Skiba et al., 2004).

Research examining these cases of violent retaliation indicates that students resorting to violent behavior often shared their intentions with peers beforehand (Langman, 2015; National Threat Assessment Center, 2019; Vossekuil, 2004). However, in most cases, peers did not share this critical information with adults to enable them to prevent the violence (Langman, 2017; Newman et al., 2004) due to fears of punitive consequences from adults and retaliation from peers (Allnock & Atkinson, 2019; Brank et al., 2007; Stone & Isaacs, 2002; Syvertson et al., 2009).

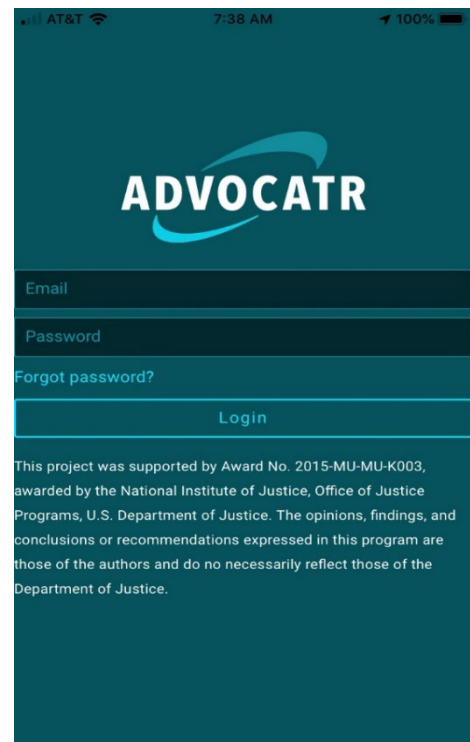
In sum, the research within which our project was conceptualized documents (a) high and stable rates of peer victimization disproportionately affecting students based on their gender, racial background, and sexual orientation, (b) a linkage between peer victimization and retaliatory violence against individuals or entire school communities, (c) evidence of prior peer knowledge of violent intentions, and (d) students' reluctance to share this knowledge with school adults to help prevent violence. Therefore, we conceptualized a comprehensive school safety framework that would promote (a) students' ability to communicate concerns about victimization to school adults before it potentially escalates into violence, (b) a non-punitive, restorative approach to school discipline and (c) students' active participation in resolving conflict and preventing peer victimization from re-occurring. Given our focus on high schools, we emphasized student agency in our initial conceptualization. Current approaches to school violence prevention, including state-wide tiplines (Planty et al., 2018) and bully-prevention

programs (Polanin, Espelage & Pigott, 2012), tend to be adult-driven and marginalize student voices. This seems contraindicated for high schools, where students desire both autonomy from adults and independent decision-making (Nucci et al., 1996; Yeager et al., 2015). Given that adolescents are digital natives and often prefer electronic over in-person communication, we emphasized mobile communication technology in our initial concept.

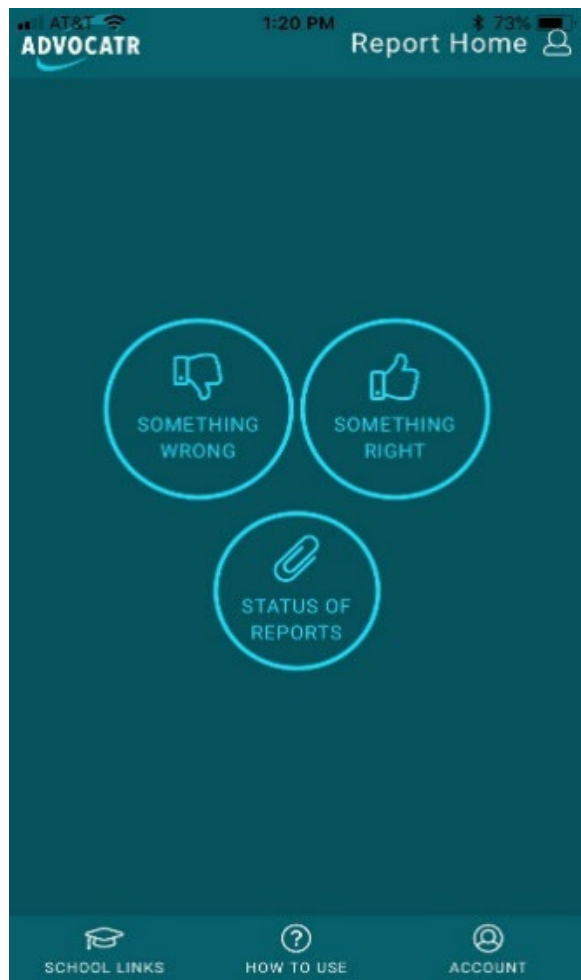
The purpose of Project SOARS was to develop and test a comprehensive school safety framework based on current literature and guided by feedback from high school students, staff, and parents. We first provide an overview of the SOARS framework components and then describe their iterative development and testing.

SOARS Framework Overview

The student-centered and technology-driven SOARS framework consists of the following four components. The first and central component of the SOARS framework is *Advocatr*. *Advocatr* is a reporting tool that is accessible via mobile app or website located at <https://advocatr.org/>. Only students with a user account can access the tool and sign-in with their username and password. As such, information submitted through the app is not anonymous, but confidential. *Advocatr* has the following functions: It allows students to report “Something Wrong” (e.g., planned violence, bullying, harassment, vandalism, substance use) as well as “Something Right” (e.g., kindness, generosity, helping others). Students can choose from a menu of behaviors as well as describe their experience.



Advocatr app login



Advocatr home page

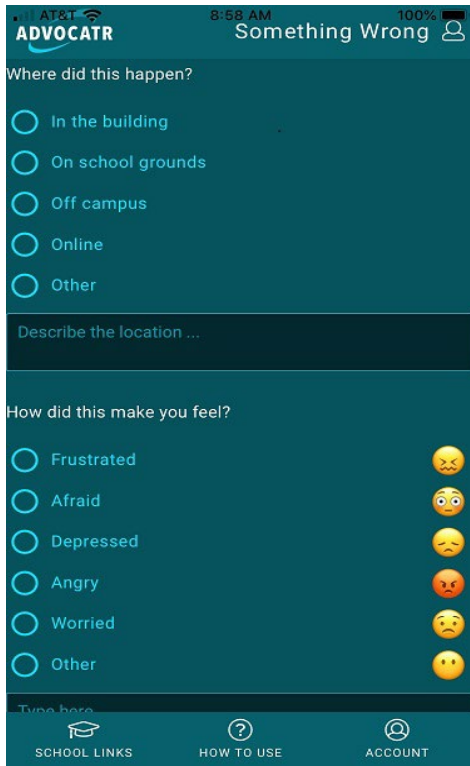
Students may choose to:

- (1) report “something wrong”
- (2) report “something right”
- (3) check on “status of reports” submitted

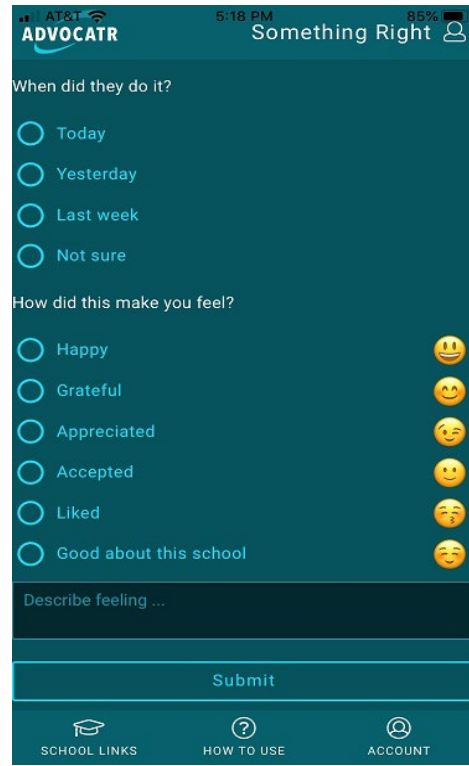
Links:

- “School Sites” links to school website
- “How to Use” links to short videos
- “Account” manages security & access

Students are prompted to indicate who is affected by the behavior, when, where, and how long it has been occurring, and how it affects them emotionally. Finally, users can check the status of the reports they submitted, that is, whether a report has been received, is in review, or is closed. When a student makes a report, the school-based SOARS coordinator receives an alert and accesses the information through the *Advocatr* website. The SOARS coordinator addresses the concern as soon as possible within the school’s discipline policy and can also reach out to the reporting student to address the concern in person or gather more information to resolve the issue.



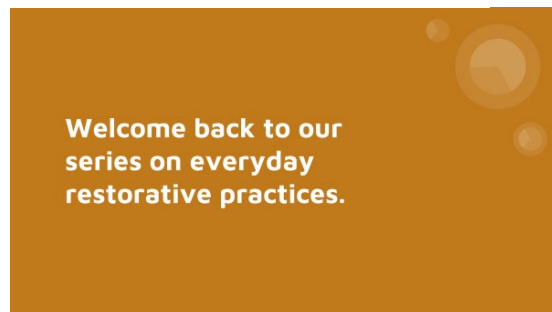
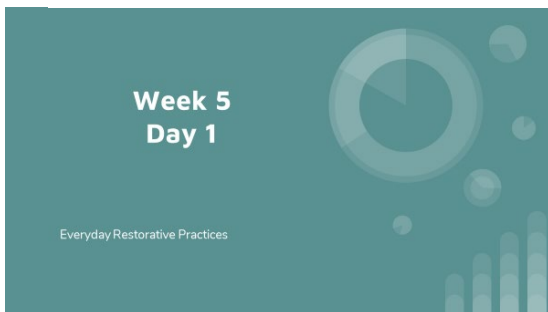
Advocatr “Something Wrong” report



Advocatr “Something Right” report

Second, students’ use of *Advocatr* is supported through the teacher-delivered 9-week *SOARS Multimedia Learning Experience* curriculum. The curriculum focuses on (a) student ownership of school safety, (b) the risks and rewards of advocacy and self-advocacy, (c) physical and emotional safety, and (d) restorative approaches to resolving conflict and demonstrating accountability for one’s behavior.

Excerpt from Multimedia Learning Learning Experience audiovisual lesson



We know that restorative practices are good for us...

Acts of kindness and repair cause the body to release natural feel-good chemicals like endorphins and oxytocin...

...and to produce less cortisol, a stress hormone that causes mood disorders, illness, and aging.

We also know that repairing small problems or hurtful situations...

can prevent them from becoming bigger problems, like threats of violence.

But even small acts of repair can feel awkward...

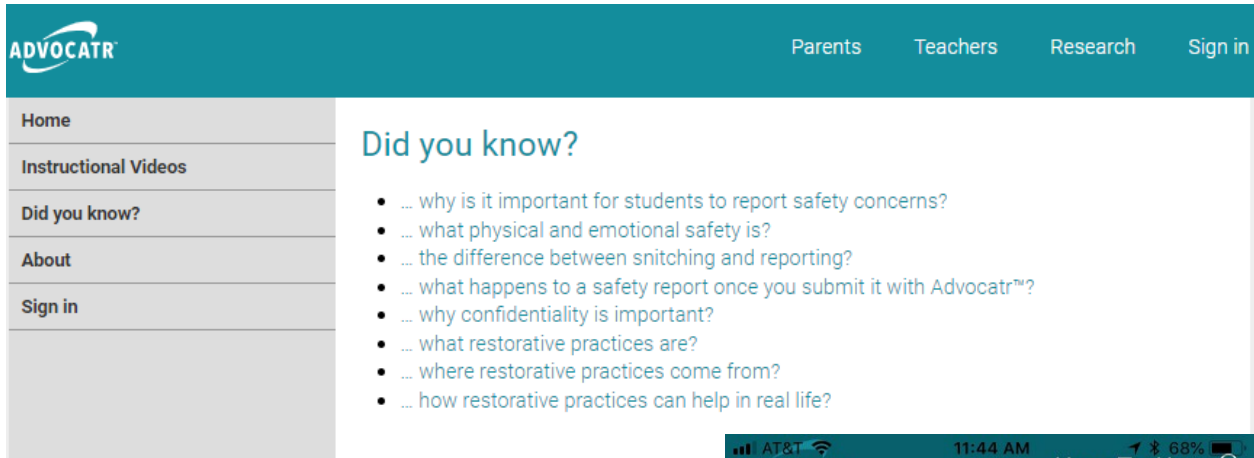
Like any skill, repairing mistakes takes practice.

The first step is to pay attention to how your behavior affects others.

Read people's body language and when you notice your behavior has had a negative impact...

...take these steps to correct the situation.

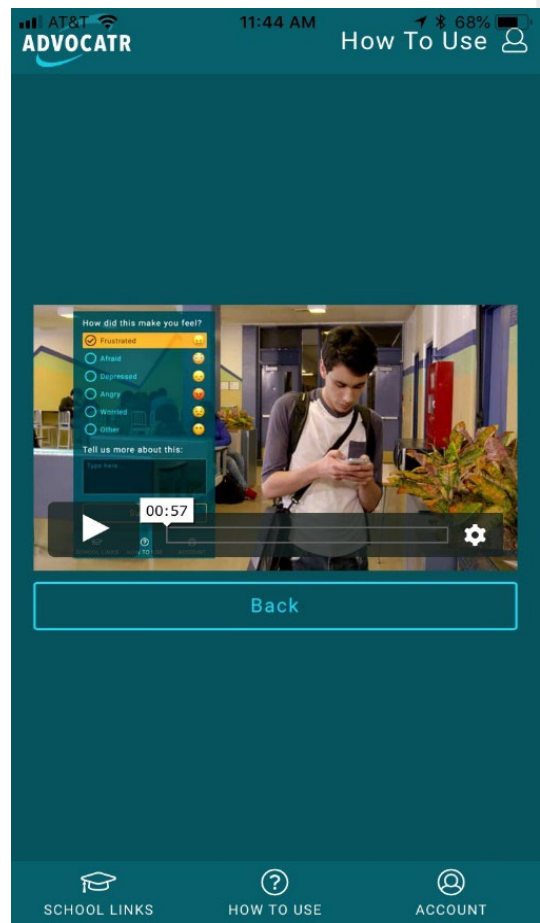
Each instructional activity in the Multimedia Learning Experience is linked to a brief video and a one-page *Did You Know?* document (available on the *Advocatr* website) that illustrate and summarize key information relevant to the target concept.



The screenshot shows the Advocatr website interface. On the left is a navigation menu with the following items: Home, Instructional Videos, Did you know?, About, and Sign in. The main content area is titled "Did you know?" and contains a bulleted list of questions:

- ... why is it important for students to report safety concerns?
- ... what physical and emotional safety is?
- ... the difference between snitching and reporting?
- ... what happens to a safety report once you submit it with Advocatr™?
- ... why confidentiality is important?
- ... what restorative practices are?
- ... where restorative practices come from?
- ... how restorative practices can help in real life?

Student “Did You Know?” link on app/website



The screenshot shows the Advocatr app interface. At the top, it displays the AT&T logo, the time 11:44 AM, and a battery level of 68%. The main content area features a video player with a poll overlay. The poll asks "How did this make you feel?" and lists several options: Traumatized, Afraid, Depressed, Angry, Worried, and Other. Below the poll is a text input field labeled "Tell us more about this:". The video player shows a timestamp of 00:57 and a play button. A "Back" button is located below the video player. At the bottom of the app, there is a navigation bar with three icons: a graduation cap for "SCHOOL LINKS", a question mark for "HOW TO USE", and a person icon for "ACCOUNT".

Video accessible on *Advocatr* app

The third component of the SOARS framework consists of informational briefs for teachers and parents. Although our framework is student-centered, adults supporting and caring for students need to be informed about the research base supporting the SOARS framework. The informational briefs focus on the impact physical and emotional safety have on students' learning, the importance of advocacy and self-advocacy, and introduce readers to restorative approaches to conflict resolution. All briefs are located on the *Advocatr* website.

The screenshot shows the ADVOCATR website interface. At the top, there is a teal navigation bar with the ADVOCATR logo on the left and links for 'Parents', 'Teachers', 'Research', and 'Sign in' on the right. A vertical sidebar on the left contains a menu with 'Home', 'Instructional Videos', 'Did you know?', 'About', and 'Sign in'. The main content area is titled 'Teachers' and contains the following text:

ADVOCATR™ is a tool that students can use to communicate positive and negative school activities that impact their safety and affect school climate. The ADVOCATR™ app was developed based on feedback from students, school personnel, and parents in school communities like yours.

ADVOCATR™ is anchored in the literature on school safety and its premises are simple:

- Student victimization (e.g. bullying, harassment, social isolation) occurs frequently and can escalate into violence.
- Students, more than adults, tend to be aware of the student victimization that occurs in schools.
- Students rarely communicate their knowledge of victimization to adults who could prevent escalation into violence.
- Restorative approaches to conflict resolution can lead to reductions in negative activities.

ADVOCATR™ is part of the SOARS school safety framework. [About SOARS](#)

We are grateful for your strong commitment to keeping your school community safe. The team behind ADVOCATR™ wants to express our appreciation for everything you, as teachers, do to ensure that students learn and mature in a physically and emotionally safe environment. We hope that ADVOCATR™ provides a welcome addition to your existing safety practices and can facilitate communications and decisions that are critical to keeping your school community safe. If you want to learn more about how you can bring ADVOCATR™ to your school [click here](#).

If you want to learn more about the SOARS school safety framework, follow these links:

Did you know ...

- ... [what the SOARS framework consists of?](#)
- ... [that the SOARS framework is derived from research?](#)
- ... [that the SOARS framework aligns with PBIS?](#)
- ... [why physical and emotional safety are important for students' success?](#)
- ... [what happens when students feel unsafe?](#)
- ... [that students know a great deal about threats to school safety?](#)

Informational Briefs: Teachers

ADVOCATR Parents Teachers Research Sign in

Home
Instructional Videos
Did you know?
About
Sign in

Parents

Why ADVOCATR™?

Students' physical and emotional safety is a fundamental concern of your child's school. Safety can be promoted by encouraging positive acts of respect, friendliness, and thoughtfulness. And threats to safety can be prevented by reporting and preventing hurtful or dangerous acts.

Here is where ADVOCATR™ comes in. ADVOCATR™ is a tool that your student can use to communicate confidentially with trusted adults at school about threats to safety, and about positive activities as well. When safety is concerned, communication helps adults resolve situations before they get worse.

In any school environment, students are more knowledgeable than adults about problems among students. Students know about tensions, conflicts, motives, and consequences in peer-group interactions. For example, a report from the U.S. Secret Service National Threat Assessment Center examined 37 school attacks between 1994 and 2000. This analysis showed that in 31 of the cases, the attackers shared their plans with other students before carrying them out.

ADVOCATR™ is part of the SOARS school safety framework. If you want to learn more about the SOARS school safety framework and how it can benefit your student, follow these Did you know links:

Did you know...

- ...that students can feel unsafe in a safe school?
- ...that students learn more when they feel safe?
- ...that advocacy and self-advocacy are important skills?
- ...that restorative practices can promote students' sense of fairness?

If you are interested in how your child can use ADVOCATR™ to increase physical and emotional safety and the overall climate of their school [click here](#).

Informational Briefs: Parents

The fourth component of the SOARS framework is a student-led, school-wide safety campaign. The SOARS curriculum includes activities to generate data about how students experience their school environment and invites students to mount a campaign addressing what students enjoy about school as well as any concerns students might have about their school's climate. The campaign is intended to raise awareness of the *Advocatr* app, empower students to make their voices heard, and promote shared responsibility for the physical and emotional health and safety of all school community members. Safety campaign resources, including steps for

planning, preparing, implementing and evaluating a campaign, are available on the *Advocatr* website.

**Something Right Campaign
Weekly Checklist**

- Collect **Something Right** data from school administrators. Record in *Campaign Brief*.
- Collect **Brainstorm Session** notes from participating classrooms. Record in *Campaign Brief*.
- Analyze **Something Right** data. Determine the percentage of students who reported something right, what happened, and the effect it had. Record in *Campaign Brief*.
- Summarize **Brainstorming Session** strategies for **Something Right for Everyone** campaign. Record in *Campaign Brief*.
- Morning announcements—report **Something Right** data for the week of _____.

Weekly posters (Use content from *Campaign Briefs*)


- Create and post **Know the Facts** poster
Use research from *Campaign Brief* and/or other research.
- Create and post **Something Right Data** poster
Include most recent *ADVOCATR* app data analysis.
- Create and post **Call to Action** poster
Include acts of kindness and a summary of classroom brainstorming.

Newsletters--Develop articles, blog posts, and social media posts.

Video

- Use this *Campaign Checklist* video throughout the beginning, middle, and end of the campaign.
- Conduct interviews with students and staff about their experiences.
- What act of kindness did you see?
 - How did it make you feel?
 - What act of kindness did you do?
 - How did it make you feel?

Edit with a soundtrack into short weekly video chapters or one longer campaign story.



Student Campaign materials

DEVELOPMENT, IMPLEMENTATION, AND TESTING OF THE SOARS FRAMEWORK COMPONENTS

Project SOARS followed an iterative development model that consisted of four phases: First, we conducted formative research with focus groups to assess our stakeholders’ perceptions of the conceptualized framework components. Second, we developed initial prototypes of each component and conducted user acceptance tests with each stakeholder group. Third, we conducted a small-scale field test to assess the feasibility and acceptability of the *Advocatr* app and curricular materials. Fourth, we conducted a pilot test to assess the promise of effectiveness of the entire framework. Between each phase, we revised and adapted the framework components based on feedback from our study participants. Next, we describe the subjects, design and methods, data analysis, and findings for each phase of the project.

| Year 1 2016 | Year 2 2017 | Year 3 2018 | Year 4 2019 | Year 5 2020 |
|---|--|---|----------------|---|
| Phase 1 | Phase 2 | Phase 3 | | Phase 4 |
| Formative research Focus groups, key informant interviews | Develop component prototypes User acceptance tests | Complete component development Feasibility field test | | Implementation Pilot test to evaluate promise of efficacy |

SOARS’ iterative development design

Phase 1 (2016): Formative Research with Focus Groups

We conducted two waves of focus groups in 2016 with students, school personnel, and parents. Phase 1 was driven by the following research questions: (1) What are the primary student, school personnel, parent, and community stakeholder concerns regarding school safety? (2) What barriers and facilitators are present to address the stakeholder concerns? And how can these concerns be addressed with existing resources and practices?

The success of any safety reporting app rests with the willingness of students to report. In

the focus groups with students, there was much discussion of barriers to reporting and how to overcome these barriers. We report on the student focus groups in great detail given our focus on leveraging student voices.

Student Focus Group Participants

Participant data was collected during two waves of focus groups to inform the development of *Advocatr* and the implementation of the SOARS school safety framework. Focus group questions were structured around school safety concerns and understanding how students feel most comfortable reporting. Participants ($n = 40$) were selected using convenience and purposive sampling to recruit a diverse pool of students from all grade levels and representing a diverse group of demographics from four schools participating in Project SOARS (see Table 1 for a summary of all participant demographics).

Student Focus Groups: Design and Methods

Focus groups met for about 2 hours and were facilitated by a project team member. The sessions were audio recorded with the consent of each participant and detailed field notes were taken during the focus groups. All procedures were reviewed and approved by the co-PIs respective IRBs. Focus group audio recordings were transcribed by undergraduate research assistants with IRB training for research with human subjects.

The phenomenological research approach was utilized to inform analysis of the student

Table 1. Student Participant Demographics

| Demographics | N | % |
|-----------------|-------|--------|
| Sample | 40 | 100.0% |
| Site | | |
| Illinois | 16 | 40.0% |
| Oregon | 24 | 60.0% |
| Age (Years) | 14-18 | |
| Gender | | |
| Female | 22 | 55.0% |
| Male | 17 | 42.5% |
| Transgender | 1 | 0.1% |
| Race/Ethnicity | | |
| White | 18 | 45.0% |
| Latinx | 6 | 15.0% |
| Black | 10 | 25.0% |
| Asian | 2 | 5.0% |
| Multiracial | 5 | 12.5% |
| Native American | 1 | 0.1% |
| Declined | 2 | 0.1% |
| Sexuality | | |
| Heterosexual | 34 | 85% |
| Bisexual | 1 | 0.1% |
| Gay or lesbian | 2 | 0.1% |
| Declined | 3 | 0.1% |

Note. Participants could co-identify

focus group data (Moustakas, 1994). This approach to qualitative research focuses on the similarities of a lived experience (e.g., anti-snitching culture) within a particular group (e.g., high school students). Quotes from participants were identified to support findings and provide examples of each qualitative theme. Findings were organized to answer three research questions: (1) How do students define snitching or reporting? (2) What are the perceived or lived barriers and consequences to reporting concerns to adults (i.e., snitching)? and (3) Under what circumstances is reporting to adults perceived to be effective or acceptable?

Student Focus Groups: Data analysis

The data collected were read multiple times with the goal of identifying similar phrases and themes that were later grouped to form themes and meaning. The research team ($n = 10$) held weekly two-hour long meetings for four months to analyze the data and discuss the existing literature around snitching. Each researcher had different levels of experience with the data sets, ranging from no prior experience to being involved with data collection and focus group transcription. The majority of themes and respective codes were derived from the data (e.g., definitions of snitching vs. reporting) and a few themes were derived from the existing snitching literature (e.g., community characteristics and police activity).

Group discussions facilitated the understanding of text examples, the identification of codes, the development of a codebook, a transparent coding process, and a collective interpretation of results. One qualitative method for extracting and interpreting the richest responses is memoing (Maxwell, 2013). Memoing is a type of bracketing that allows researchers to document their personal experiences with the data to help remove themselves from the process. The research team initially reviewed the same datasets and created analytic memos on snitching related responses from participants. Collectively, the research team identified and

extracted all snitching related text from the larger focus group data set. After identifying all related content, the analytic memos were used to develop three research questions and identify initial themes in the codebook. An additional round of reviewing the data allowed the research team to identify multiple subthemes as codes. Definitions of themes and codes were reviewed and approved by all members of the research team before qualitative coding. Microsoft Excel was used to organize the transcriptions from the focus groups; a Google document was used to create the codebook; and the Ninox database was used to code the data. After the snitching related content was imported into Ninox, the research team was randomly assigned to work in pairs to assign codes to each snitching related text from participants. After individually coding, pairs met to reconcile any disagreements in coding assignments. After reconciliation, the research team collectively decided on the most salient themes and subthemes to address the research questions.

Student Focus Groups: Findings

Students across all schools expressed concerns about snitching and described various factors that influence their likelihood to report concerns to adults. Overall, students defined snitching as reporting concerns to adults that are deemed as unnecessary or where students should have the efficacy to handle the issue themselves. Students also described snitching as being characterized by school and community culture and the perceived consequences of snitching. For example, snitches could be labelled by terms such as lame, untrustworthy, and outcast, and are at-risk for “endless” victimization both in-person and online. On the other hand, students agree not to snitch in order to blend in and feel safe both inside and outside of school. There was a consensus among students that as young adults they were responsible for handling their own issues and not getting involved with other student’s issues. Some students spoke about

personal or witnessed negative consequences of reporting and times when reporting was ineffective. For instance, one student mentioned how when they reported a problem with another student in the past, they were told to avoid the student; however, the problems with this student persisted. Students stated that the consequences for snitching are woven into the school culture; thus whether or not a consequence is based on personal experience, students often viewed snitching as having the potential to produce worse or more pervasive outcomes than the problem they may have been facing.

What constitutes effective and/or acceptable reporting was subjective. Students in these focus groups agreed that the difference between snitching and reporting depends on the severity of the issue, confidentiality, and their trusting relationships with adults. Incidents that may jeopardize the safety of all students in the school, not just those involved in an incident were perceived as more severe and worth reporting. Confidentiality emerged as an expectation for students to report to school authorities. Students said that they would be more likely to report when not directly involved in the situation and able to conserve confidentiality. Additionally, some students defined confidentiality as disclosure that remains a secret between the teacher and themselves and another student defined confidentiality as information that does not leak to students. Overall, trust in teachers and staff played a large role in a student's decision to report. Students in this sample reported feeling like some staff did not know how to respond appropriately to reports and did not take student concerns seriously enough. Conversely, high quality relationships between students and staff positively influence a student's likelihood of reporting. Students across focus groups noted that they were more likely to open up to staff when they feel supported or connected. Altogether, students in all schools stated that reporting behaviors are dependent on many factors, including perceived, witnessed, or lived consequences;

however, there were cases where reporting was deemed as acceptable and effective (Espelage et al., under review).

Parents and Staff Focus Group: Participants

We held two waves of focus groups with school staff/administrators and with parents. In Wave 1, 20 parents and 36 school staff participated, and in Wave 2, 8 parents and 35 school staff participated. Tables 2 and 3 summarize participant demographics.

Table 2. Participant Demographics Focus Group Wave 1

| Demographics | Parents | | Staff/Admin | |
|-----------------|---------|------|-------------|-------|
| | N | % | N | % |
| Sample | 20 | 100% | 36 | 100% |
| Site | | | | |
| Illinois | 12 | 60% | 25 | 69.4% |
| Oregon | 8 | 40% | 11 | 30.5% |
| Gender | | | | |
| Female | 16 | 80% | 21 | 58.3% |
| Male | 4 | 20% | 15 | 41.6% |
| Race/Ethnicity | | | | |
| White | 13 | 65% | 22 | 61.1% |
| Latinx | 3 | 15% | 2 | 5.5% |
| Black | 4 | 20% | 10 | 27.7% |
| Asian | 0 | 0% | 1 | 2.7% |
| Multiracial | 0 | 0% | 0 | 0% |
| Native American | 1 | 5% | 0 | 0% |
| Declined | 0 | 0% | 2 | 5.5% |

Note. Participants could co-identify race/ethnicity.

Table 3. Participant Demographics Focus Group Wave 2

| Demographics | Parents | | Staff/Admin | |
|-----------------|---------|------|-------------|-------|
| | N | % | N | % |
| Sample | 20 | 100% | 35 | 100% |
| Site | | | | |
| Illinois | 12 | 60% | 26 | 74.3% |
| Oregon | 8 | 40% | 9 | 25.7% |
| Gender | | | | |
| Female | 15 | 75% | 20 | 57.1% |
| Male | 5 | 25% | 15 | 49.9% |
| Race/Ethnicity | | | | |
| White | 11 | 55% | 23 | 65.7% |
| Latinx | 2 | 10% | 2 | 5.7% |
| Black | 4 | 20% | 10 | 28.6% |
| Asian | 0 | 0% | 0 | 0% |
| Multiracial | 1 | 5% | 1 | 2.9% |
| Native American | 1 | 5% | 0 | 0% |
| Declined | 1 | 5% | 0 | 0% |

Note. Participants could co-identify race/ethnicity.

Parents and Staff Focus Group: Design

As described above, focus groups met for about 2 hours and were facilitated by a project team member. The sessions were audio recorded with the consent of each participant and detailed field notes were taken during the focus groups. All procedures were reviewed and approved by the co-PIs respective IRBs.

Parents and Staff Focus Group: Data Analysis

Parent and Staff data were analyzed using open and selective coding. During selective

coding, the emergent themes were organized in the overarching categories of: 1) teacher social emotional competence and 2) barriers or facilitators to physical and emotional safety. Prior to data analysis, coders did not anticipate or predetermine the use of social emotional competencies as coding themes. When coders identified the overlap of many emergent themes to social emotional competencies, the coders intentionally selected the themes of self-awareness, social awareness, responsible decision making, self-management, and relationship management (Jennings & Greenberg, 2009) for axial and selective coding.

Parents and Staff Focus Group: Findings

Parent and staff responses focused on school safety mechanisms addressing emotional and physical safety, and barriers or facilitators to emotional and physical safety, including (a) school wide barriers, (b) individual influences of student's decisions to seek help, and (c) positive perceptions of school policy and practice. Emerging themes included teacher social emotional competencies such as social awareness and relationship management, communication, teacher self-management in relation to professional behaviors and ability to demonstrate empathy and authenticity. Emotional safety was identified as school codes of conduct related to aggressions, bullying, and harassment, and any structure or person intentionally available to meet issues related to a student's emotional safety. Physical safety was identified as mechanisms to prevent bodily harm such as: school personnel, school code of conduct, cameras, phone and text communication systems, resource officers, call/safety button in classrooms, teachers in hallways, and school safety procedures.

School wide barriers and facilitators were reported as being something present (real or perceived) related to the school wide setting of how students and school personnel interact that creates a barrier. The strongest barrier themes to emerge from participant data were categorized

as (1) anti-social behavior and bias/discrimination, and (2) criticism of school personnel practice and policy

Based on student feedback, we revised our initial model of the reporting tool to (a) ensure confidential reporting, and (b) include an option to report positive behavior. In addition to the need for confidentiality, students felt that an exclusive focus on negative behaviors or safety concerns was counterproductive and wanted to have the opportunity to share positive behaviors. This is consistent with literature that recommends peer norming of positive behavior to encourage prosocial peer interactions and improve overall school climate (Connell, 2017). Based on student, staff and parent feedback we emphasized restorative practices resolution in the curriculum component of the framework. Restorative practices have been associated with improved relationships and increased trust between students and teachers (Gregory et al., 2016), which our student participants identified as critical for sharing safety information.

Phase 2 (2017-18): Prototype Development/User Acceptance Tests (UAT)

We built prototypes of the *Advocatr* app, website, informational briefs, and safety campaign guidelines. We also developed initial scripts for videos featuring students engaging with *Advocatr*. The UATs were driven by the following research questions: (1) Is [component X] perceived as relevant to and useful for promoting a safe school environment by [the targeted end users, e.g., students, teachers, parents]? (2) Is [component X] perceived as easy to implement by [the targeted end users, e.g., students, teachers, parents]?

Participants

We recruited students, school personnel, and parents from two high schools, one in Oregon and one in Illinois for a total of three waves of UATs. Students and parents participated in Wave 1 and Wave 3 testing and school personnel participated in all three waves (see Table 4).

The majority of student participants were from grades 10 (38%) and 11 (38%) with fewer from grades 12 (21%), and grade 9 (2%). The majority of school personnel participants were teachers (62%) teaching subjects including English/Language Arts, Health, French, Science, Math, History, Art, Media Skills, and special education. A total of 27% of school personnel participants were Educational Assistants and 9% were school administrators. School personnel also included a test coordinator, school counselor, a home interventionist, and a librarian. Seven parents participated in Wave 1 testing and 20 parents participated in Wave 3 testing.

Table 4: UAT Participants by Wave

| | <u>Wave 1 (n)</u> | <u>Wave 2 (n)</u> | <u>Wave 3 (n)</u> |
|------------------|-------------------|-------------------|-------------------|
| Students | 21 | | 26 |
| School Personnel | 21 | 20 | 23 |
| Parents | 7 | | 20 |

Design and Methods

We conducted three waves of UATs in fall 2017, winter 2018, and spring 2018 to receive feedback from all users on all framework components. In Wave 1, we tested the usability of the *Advocatr* app and the content of the scripts for the instructional videos with students, school personnel, and parents. In Wave 2, we tested the usability of the instructional activities and accompanying one-page “Did-You-Know” informational briefs with school personnel. In Wave 3, we tested the usability of the instructional materials, the accompanying “Did-You-Know” informational briefs, and components of the safety campaign materials with students, teachers, and parents. Separate sessions were conducted for each participant group and lasted about 2 hours. After participants provided informed consent, the session facilitator introduced the project and provided participants with the prototype materials. Participants were then asked to complete a paper and pencil survey modeled after usability testing guidelines provided in the literature, and asking them to score the usability and acceptability of each framework component (Davis,

1989; Holden & Karsh, 2010; Lee, Kozar, & Larsen, 2003). Wave 1 surveys focused on *Advocatr*'s technology/user interface, content, and implementation feasibility, and the video scripts' informational value, clarity, and relevance. Wave 2 surveys focused on the contextual fit, relevance, and engagement value of the curricular materials and informational briefs. Wave 3 surveys focused on the engagement value of the videos and informational briefs as well as the contextual fit and relevance of the safety campaign guidelines. All survey items were scored on a 4-point Likert-type scale ranging from 1 = "strongly disagree" to 4 = "strongly agree." Participants could also choose "not applicable" and had the option to provide additional comments. Because the usability tests were designed to provide us with feedback for further revisions, we used benchmark scores (i.e., < or > 3.0 on a 4-point scale) as guidelines for further revisions. Open-ended responses and recommendations were reviewed and integrated into revisions.

Data analysis

We conducted descriptive analyses of the survey data using mean ratings of 3 or greater on a 4-point scale as benchmarks for acceptable usability. We reverse-coded negatively worded items to ensure all items had the same directionality prior to calculating means and standard deviations for each scale.

Findings

In Wave 1, the mean scores provided by students exceeded 3.0 for all survey domains except implementation of the *Advocatr* app (2.56). Further examination of the raw data indicated that students were concerned about *Advocatr*'s compatibility with their school's cell phone policy. Students also suggested adding "sexual harassment" to the drop-down menu of safety threats.

School personnel ratings of *Advocatr* were below 3.0 due to concerns about school staff’s ability to address student concerns adequately. School personnel indicated they would welcome more in-depth training in restorative practices to be prepared to address student concerns. Parent ratings of *Advocatr* were below 3.0 except for implementation. Parents welcomed the opportunity for students to make their voices heard and also felt that sexually inappropriate behavior should be added to the drop-down menu of safety threats. However, they were concerned about the school’s willingness to take student reports seriously and follow-up to prevent safety threats from re-occurring. In Wave 2, the mean ratings provided by school personnel were above 3.0 with the exception of the engagement value of the informational briefs, indicating that school personnel felt that the curricular materials were valuable and fit with existing curriculum. In Wave 3, the mean ratings of all stakeholder groups were mostly above 3.0. School personnel

remained critical of the videos’ and the informational briefs’ ability to engage students with ratings slightly lower than 3.0. They also rated the lesson plan introducing students to the safety campaign lower than 3.0. Table 5 provides an overview

Table 5: Means and Standard Deviations for Usability Tests

| | <u>Students</u> | | <u>School Personnel</u> | | <u>Parents</u> | |
|---|-----------------|------|-------------------------|------|----------------|------|
| | <i>M</i> | (SD) | <i>M</i> | (SD) | <i>M</i> | (SD) |
| <u>Wave 1</u> | | | | | | |
| Usability (<i>Advocatr</i> app) | 3.16 | .65 | 2.85 | .62 | 2.82 | .60 |
| Content (<i>Advocatr</i> app) | 3.19 | .55 | 2.85 | .69 | 2.97 | .63 |
| Implementation (<i>Advocatr</i> app) | 2.56 | .62 | 2.93 | .51 | 3.25 | .50 |
| Video Scripts (video scripts) | 3.02 | .60 | 2.88 | .70 | 3.05 | .53 |
| <u>Wave 2</u> | | | | | | |
| Contextual fit (Instruction) | | | 3.23 | .65 | | |
| Feasibility (Instruction) | | | 3.02 | .62 | | |
| Relevance (Instruction) | | | 3.11 | .52 | | |
| Relevance (Information briefs) | | | 3.17 | .38 | | |
| Ability to Engage (Information briefs) | | | 2.84 | .61 | | |
| <u>Wave 3</u> | | | | | | |
| Ability to Engage (videos) | 3.10 | .67 | 2.94 | .55 | 3.34 | .74 |
| Contextual fit (Lesson Plan, Instruction) | | | 3.13 | .54 | | |
| Ability to Engage (Information briefs) | 3.23 | .67 | 2.94 | .58 | 3.15 | .73 |
| Ability to Engage (Safety Campaign Video) | 3.21 | .61 | 3.05 | .58 | 3.14 | .69 |
| Clarity & Relevance (Safety Campaign) | 3.45 | .53 | | | | |
| Contextual Fit (Safety Campaign) | | | 3.22 | .46 | 3.42 | .73 |
| Contextual fit (Lesson Plan, Safety Campaign) | | | 2.94 | .65 | | |

of descriptive outcomes across all waves.

Based on each wave of UAT findings, we revised the framework components to address

stakeholder concerns. Our efforts to respond to stakeholder feedback needed to be balanced with our participating districts' concerns. For example, although students and parents felt that sexual harassment should be added as a safety threat due to its prevalence in high school settings, participating districts were concerned about potential liability to address concerns once they are reported. These concerns and the desire to empower students needed to be carefully balanced in our development work (Vincent, Murray, et al., in review).

Phase 3 (2018-2019): Field Test of *Advocatr* and Curricular Materials

We integrated all media, technology, and text assets of the SOARS program into a complete implementation package. We field tested the *Advocatr* app and the curricular materials with a small number of classrooms from one school in Oregon and one school in Illinois. The field test was driven by the following primary research questions: (1) Is SOARS perceived as useful and feasible for promoting a safe school environment by all stakeholders (students, teachers, administrators, school personnel, and parents)? (2) Is SOARS perceived as easy to implement by all stakeholders (students, teachers, administrators, school personnel, and parents)? In addition, we also tested initial impact of the framework components on students' perceptions of their safety at school and the extent to which they engage in or are affected by peer victimization, teacher perceptions of student behavior and their school environment, and parent perception of their participating student's behavior.

Participants

In collaboration with school administrators, we recruited classroom teachers and asked each teacher to select one of their classrooms for participation in the study. Participating teachers reached out to the students in their participating classroom and their parents to obtain parental consent for students to participate and to recruit parent participants.

Across both sites and both semesters of the school year, 10 teachers participated (4 in Illinois, 6 in Oregon), 121 students, and 20 parents. Table 6 provides an overview of participants’ demographics. Not all participants completed all demographic questions. Participants could select multiple racial backgrounds. Some parents had more than one child at different grade levels.

Table 6: Field Test Participant Demographics

| | | Students | Teachers | Parents |
|----------------------------------|----------------------------------|----------|----------|---------|
| Gender | Male | 38 | 0 | 1 |
| | Female | 82 | 10 | 19 |
| | Transgender | 1 | 0 | 0 |
| Hispanic/Latino Ethnicity | Yes | 22 | 0 | 0 |
| | No | 84 | 6 | 20 |
| | Prefer not to answer | 12 | 0 | 0 |
| Race | American Indian/Alaska Native: | 8 | 0 | 1 |
| | Asian | 13 | 0 | 0 |
| | African-American/Black | 23 | 0 | 8 |
| | Caucasian/White | 74 | 10 | 13 |
| | Native Hawaiian/Pacific Islander | 4 | 0 | 0 |
| | Multiracial | 30 | 0 | 0 |
| | Prefer not to answer | 10 | 0 | 0 |
| Sexual Orientation | Heterosexual | 89 | N/A | N/A |
| | Lesbian | 3 | | |
| | Gay | 3 | | |
| | Bisexual | 27 | | |
| | Questioning | 7 | | |
| | Prefer not to answer | 7 | | |
| Grade level | 9 th | 44 | 7 | 5 |
| | 10 th | 21 | 4 | 3 |
| | 11 th | 39 | 7 | 9 |
| | 12 th | 16 | 7 | 1 |
| Education | Less than high school | N/A | 0 | 0 |
| | High school graduate/GED | | 0 | 1 |
| | Some college | | 0 | 8 |
| | Community College/AA/Vocational | | 0 | 1 |
| | BA/BS | | 0 | 3 |
| | Postgraduate work | | 2 | 2 |
| Teaching Experience | Graduate degree | | 8 | 5 |
| | Less than 2 years | N/A | 0 | N/A |
| | 2 to 5 years | | 2 | |
| | 6 to 10 years | | 5 | |
| | 11 to 20 years | | 0 | |
| | More than 20 years | | 3 | |

Participating teachers taught English Language Arts, Art, Health, and Science.

Design and Methods

We conducted a quasi-experimental design collecting measures at pre and post with participants serving as their own controls. At the beginning of the year, teachers attended a 2-hour orientation during which project personnel familiarized them with the project and the consent and

data collection procedures. Participating teachers completed the *Teacher and Staff School Environment Survey* (Espelage et al., 2014). This survey consists of 35 items measuring six domains: [1] Student Likely to Intervene (5 items; e.g., “A student would intervene if another student is making fun of and teasing another student who is obviously weaker”; response options are 1 (Very Unlikely) through 4 (Very Likely); [2] Staff Likely to Intervene (5 items; e.g., “A

staff member would intervene if another student is making fun of and teasing another student who is obviously weaker”; response options are 1 (Very Unlikely) through 4 (Very Likely); [3] Aggression as a Problem in the School (5 items; e.g., “How much of a problem is ‘Students picking fights with other students’?”; response options are 1 (Very Rarely) through 4 (Very Much); [4] Administration Commitment to Bully Prevention (8 items; e.g., “Your school is developing policies or programs to prevent bullying”; response options are 1 (Not Much) through 4 (Quite a Lot); [5] Positive Teacher-Staff Interactions (7 items; e.g., “Teachers and staff in this school usually get along with students.”; response options are 1 (Strongly Disagree) through 4 (Strongly Agree); and [6] Gender Equity/Intolerance of Sexual Harassment (5 items; e.g., “Sexual harassment is not tolerated at this school”; response options are 1 (Strongly Disagree) through 4 (Strongly Agree). Teachers also completed the *Behavior Problem Index (BPI)*; Moore et al., 2002) for each participating student measuring the frequency with which students engaged in negative or disruptive behaviors such as bullying others, cheating and lying, or having difficulty concentrating. Response options were 0 (Never True), 1 (Sometimes True) (1), and 2 (Often true) on a 3-point Likert type scale. Cronbach’s α for the present study was $\alpha = .70$ at both pretest and posttest. Participating students completed the *Safe School Survey* (Skiba et al. 2006). The survey consists of 42 items that assess student perceptions across four scales: [1] Personal Safety, [2] Incivility/Disruption, [3] Delinquency/Major Safety, and [4] Connection to school/Positive School Climate. Students were asked to indicate the extent to which they agreed with each statement. Response options ranged from 1 (Strongly Disagree) through 5 (Strongly Agree) on a 5-point Likert-type scale. For the present study, Cronbach’s α at pretest and posttest were: $\alpha = .87$ and $.86$ for the Personal Safety scale, $\alpha = .86$ and $.88$ for the Incivility/Disruption scale, $\alpha = .82$ and $.88$ for the Delinquency/Major Safety scale, and $\alpha = .93$

and .92 for the Connection to school/Positive School Climate scale. Students also completed the *Peer Experiences Questionnaire* (Vernberg et al., 1999). The questionnaire consists of 18 items that assess students' experiences as both victims and perpetrators of different types of anti-social behaviors at school (e.g., hitting, rumor spreading, intimidation, threats, social exclusion). Nine items assessed perpetration (e.g., student engaging in these behaviors towards peers) and nine items assess victimization (e.g., student experiencing these behaviors from peers). Parents completed the BPI for their participating child. After pre-data collection was complete, the school-based and project-supported SOARS coordinator onboarded all consented students into *Advocatr* and provided students with their log-in information. Teachers then taught one weekly lesson of the curriculum. At the end of the school year, we asked students, teachers, and parents to complete the same measures as at the beginning of the school year in addition to a consumer satisfaction questionnaire.

Data analysis

We collected *Advocatr* usage data to assess the extent to which students availed themselves of the reporting tool. We conducted paired sample *t*-tests for student outcomes only. We examined differences in student outcomes across grade levels, gender, race, and sexual orientation. Because our sample of teachers and parents was too small to yield interpretable statistical outcomes, we calculated means and standard deviations to assess differences between pre and post descriptively. We calculated effect sizes using Cohen's *d*, with small, medium, and large effects being represented by values .2, .5, and .8 respectively (Cohen, 1992).

Findings

During the school year, participating students produced a total of 20 "Something Wrong" reports and 24 "Something Right" reports. The majority of safety concerns were based on

bullying ($n = 9$) followed by alcohol and drug use ($n = 6$) and “other” ($n = 5$). Positive behaviors students noticed included helping someone out ($n = 8$), being kind ($n = 4$), complimenting someone ($n = 2$), showing empathy ($n = 2$), and “other” ($n = 3$). Some positive reports did not specify a behavior.

We found statistically significant improvements in students’ perceptions of personal safety, disruptive behaviors in their school, and major delinquency concerns. Students perceptions of their school connectedness also improved from pre to post, but this improvement did not reach statistical significance. Students’ perception of the frequency

Table 7: Students’ Self-Report and Teacher Report Paired t-test Results for Pretest-Posttest

| Instrument | Pretest <i>M (SD)</i> | Posttest <i>M (SD)</i> | Pre-Post <i>t-test</i> | Effect Size <i>Cohen’s d</i> |
|----------------------------|--------------------------|---------------------------|---------------------------|---------------------------------|
| Student Self-Report | | | | |
| Peer Victimization | 1.39 (0.6) | 1.23 (0.3) | -2.39* | .289 |
| Bully Perpetration | 1.29 (0.6) | 1.18 (0.3) | -1.74 [†] | .200 |
| Personal Safety | 3.53 (0.6) | 3.68 (0.6) | 2.25* | .295 |
| Disruption | 3.66 (0.8) | 3.33 (0.7) | -5.18*** | .588 |
| Delinquency | 3.36 (0.8) | 3.15 (0.8) | -2.76** | .317 |
| Connection | 3.41 (0.6) | 3.45 (0.5) | 0.78 | .087 |
| Teacher Report | | | | |
| Total BPI | 0.89 (1.3) | 0.70 (1.2) | -1.66 [†] | .203 |

Note. * $p < .05$. ** $p < .01$. *** $p < .00$. t is $p < .10$. Cohen’s d of .2, .5, and .8 are considered small, medium, and large effects respectively.

with which they felt victimized by others improved from pre to post (see Table 7). We did not find differences in outcomes across student gender, race/ethnicity, sexual orientation, and grade level. Their perception of the frequency with which they bullied others also improved, although not at the expected significance level. Teacher perceptions of student behavior also improved with teachers reporting fewer instances when students engaged in negative behavior at the end of the school year compared to the beginning. This improvement also did not reach the expected significance level. Similarly, descriptive analyses of the parent completed BPI indicated improvements in parent perceptions of child behavior from pre to post. From pretest to posttest,

there was a small decrease in parent-reported negative child behaviors from $M = 1.37, SD = .39$ to $M = 1.32, SD = .34$. Table 7 above provides an overview of our findings.

Descriptive analyses of teacher outcomes indicated little change from pre to post. Given our small sample, observable changes are difficult to interpret. Figure 1 below provides an overview of teacher outcomes. Teachers' perceptions of students' and staff's willingness to intervene in student

victimization improved slightly from pre to post. There was little change in teachers' perception of overall student aggression and gender equity. At post, teachers felt that their

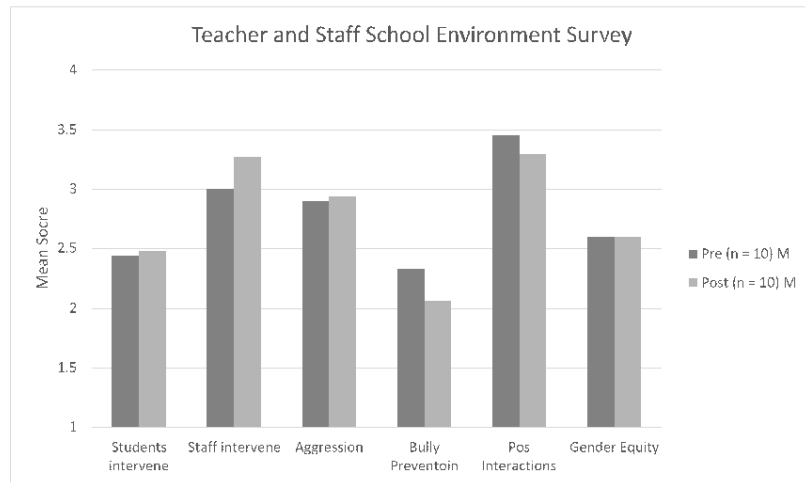


Figure 1: Teacher and Staff School Environment Survey Pretest and Posttest

school was slightly less

committed to bully prevention and that the quality of teacher and staff relationships with students declined slightly.

Consumer satisfaction outcomes indicated that all participants groups (students, school personnel, and parents) rated the intervention's acceptability and feasibility as adequate. Comparatively, students provided the lowest acceptability ratings but the highest feasibility ratings (Vincent, Walker, et al., in review).

Based on these findings from the field test and feedback we received from teachers during end-of-year debrief sessions, we revised the curricular materials. Teachers felt that lessons were too time-consuming because students had too much to say about the topics, including advocacy/self-advocacy, peer victimization, taking accountability, and emotional

safety. Teachers requested that the lessons be more streamlined to require less preparation and less time to implement in the classroom. Thus, we created the *SOARS Multimedia Learning Experience* which offered teachers narrated and non-narrated power-point presentations engaging students in brainstorming activities based on the content and auditory self-reflection exercises.

Phase 4 (2019-2020): Pilot Test to Assess the Promise of Effectiveness of the Entire Framework

We worked with four high schools (two in Oregon, two in Illinois) to conduct the pilot test following our field test data analysis. At each site, one of the participating schools was assigned to receive the intervention and the other school served as control. The pilot test was driven by the following research questions: (1) Does SOARS implementation result in reduced bullying/harassment, increased students' ownership of school safety, increased student responsibility for reporting behaviors of concern, and increased student accountability for problem-solving behavioral incidents? (2) Does SOARS implementation result in increased teacher and parent perceptions of school safety?

Note: The 2019-2020 school year was affected by school closures related to the Covid-19 pandemic. All participating schools, intervention as well as control, were affected by the school closure. At both sites, schools closed in March and students and teachers engaged in remote instruction for the remainder of the school year. All participating schools remained in the study and completed post data collection on schedule. Response rates at the end of the year were likely affected by the school closures, which created significant stress for students, teachers, and parents.

Participants

All students in the intervention schools who provided passive parental consent obtained access to *Advocatr*. We recruited 10 staff from each intervention school to deliver the curriculum to students. In

Table 8: Student Demographics*

| | Wave 1 (N=2334) | | Wave 2 (N=600) | |
|---------------------------|-----------------|-----------------------|-----------------|----------------------|
| | Control (N=876) | Intervention (N=1458) | Control (N=357) | Intervention (N=243) |
| Gender Identity | | | | |
| Male | 345 (39.4%) | 669 (45.9%) | 100 (28.0%) | 75 (30.9%) |
| Female | 467 (53.3%) | 714 (49.0%) | 248 (69.5%) | 157 (64.6%) |
| Transgender | 20 (2.3%) | 40 (2.7%) | 6 (1.7%) | 5 (2.1%) |
| Race/Ethnicity | | | | |
| Hispanic or Latino | 85 (9.7%) | 305 (20.9%) | 30 (8.4%) | 34 (14.0%) |
| African American | 183 (20.9%) | 235 (16.1%) | 86 (24.1%) | 32 (13.2%) |
| Multiracial | 113 (12.9%) | 254 (17.4%) | 43 (12.0%) | 37 (15.2%) |
| Native American | 72 (8.2%) | 103 (7.1%) | 22 (6.2%) | 9 (3.7%) |
| Asian | 31 (3.5%) | 81 (5.6%) | 9 (2.5%) | 15 (6.2%) |
| White | 511 (58.3%) | 792 (54.3%) | 227 (63.6%) | 156 (64.2%) |
| Hawaiian/PI | 20 (2.3%) | 37 (2.5%) | 6 (1.7%) | 1 (0.4%) |
| Sexual Orientation | | | | |
| Gay | 27 (3.1%) | 40 (2.7%) | 5 (1.4%) | 4 (1.6%) |
| Bisexual | 106 (12.1%) | 198 (13.6%) | 49 (13.7%) | 48 (19.8%) |
| Lesbian | 30 (3.4%) | 32 (2.2%) | 10 (2.8%) | 7 (2.9%) |
| Questioning | 54 (6.2%) | 68 (4.7%) | 20 (5.6%) | 13 (5.3%) |
| Straight | 621 (70.9%) | 1048 (71.9%) | 259 (72.5%) | 159 (65.4%) |
| Grade | | | | |
| 9th | 229 (26.1%) | 495 (34.0%) | 140 (39.2%) | 59 (24.3%) |
| 10th | 299 (34.1%) | 374 (25.7%) | 102 (28.6%) | 89 (36.6%) |
| 11th | 142 (16.2%) | 272 (18.7%) | 66 (18.5%) | 39 (16.0%) |
| 12th | 145 (16.6%) | 257 (17.6%) | 39 (10.9%) | 45 (18.5%) |

Oregon, those staff included 3 classroom teachers and the PBIS coordinators, dean of students, campus monitors, leadership advisor, and in-school-suspension room supervisor. In Illinois, 10 English teachers delivered the curriculum to students. All students and staff from intervention and control schools were encouraged to complete the student and staff surveys. We asked administrators to recruit up to 300 parents per school to complete the parent survey. At the beginning of the year, 2334 students completed the student surveys, 324 staff completed the staff survey, and 419 parents completed the parent survey. At the end of the year, 600 students completed the student survey, 332 staff completed the staff survey, and 761 parents completed the parent survey. Tables 8-10 provide demographics for all participants

Table 9: Staff Demographics*

| | Wave 1 (N=324) | | Wave 2 (N=332) | |
|------------------------|--------------------|-------------------------|--------------------|-------------------------|
| | Control (N=155) | Intervention (N=169) | Control (N=148) | Intervention (N=184) |
| Gender Identity | | | | |
| Male | 51 (32.9%) | 58 (34.3%) | 57 (38.5%) | 63 (34.2%) |
| Female | 97 (62.6%) | 103 (60.9%) | 89 (60.1%) | 109 (59.2%) |
| Transgender | 0 (0%) | 1 (0.6%) | 2 (1.4%) | 0 (0%) |
| Race/Ethnicity | | | | |
| Hispanic or Latino | 5 (3.2%) | 7 (4.1%) | 6 (4.1%) | 10 (5.4%) |
| African American | 0 (0%) | 6 (3.6%) | 7 (4.7%) | 19 (10.3%) |
| Multiracial | 2 (1.3%) | 6 (3.6%) | 5 (3.4%) | 11 (6.0%) |
| Native American | 2 (1.3%) | 5 (3.0%) | 1 (0.7%) | 6 (3.3%) |
| Asian | 2 (1.3%) | 5 (3.0%) | 2 (1.4%) | 9 (4.9%) |
| White | 131 (84.5%) | 122 (72.2%) | 125 (84.5%) | 116 (63.0%) |
| Hawaiian/PI | 0 (0%) | 1 (0.6%) | 0 (0%) | 1 (0.5%) |

*Note. Missing data for demographics not included. Participants could check all that apply. Percentages may not add up to 100.

Table 10: Parent Demographics*

| | Wave 1 (N=419) | | Wave 2 (N=761) | |
|------------------------|--------------------|-------------------------|--------------------|-------------------------|
| | Control (N=249) | Intervention (N=170) | Control (N=432) | Intervention (N=329) |
| Gender Identity | | | | |
| Male | 42 (16.9%) | 40 (23.5%) | 100 (23.1%) | 57 (17.3%) |
| Female | 198 (79.5%) | 130 (76.5%) | 320 (74.1%) | 260 (79.0%) |
| Transgender | 0 (0%) | 0 (0%) | 3 (0.7%) | 0 (0%) |
| Race/Ethnicity | | | | |
| Hispanic or Latino | 13 (5.2%) | 12 (7.1%) | 32 (7.4%) | 42 (12.8%) |
| African American | 46 (18.5%) | 20 (11.8%) | 53 (12.3%) | 42 (12.8%) |
| Multiracial | 9 (3.6%) | 6 (3.5%) | 12 (2.8%) | 20 (6.1%) |
| Native American | 4 (1.6%) | 9 (5.3%) | 8 (1.9%) | 13 (4.0%) |
| Asian | 2 (0.8%) | 4 (2.4%) | 6 (1.4%) | 8 (2.4%) |
| White | 168 (67.5%) | 135 (79.4%) | 322 (74.5%) | 226 (68.7%) |
| Hawaiian/PI | 1 (0.4%) | 2 (1.2%) | 6 (1.4%) | 1 (0.3%) |

*Note. Missing data for demographics not included. Participants could check all that apply. Percentages may not add up to 100.

Design and Methods

We conducted a trial with two conditions, intervention and control. Schools in the intervention condition received access to all framework components, while schools in the control condition conducted business as usual. We obtained passive parental consent and student assent

from student participants, and consent from staff and parent participants. After we collected pre data at the beginning of the school year, all students in the intervention schools whose parents did not opt them out of the study were onboarded into *Advocatr* and received log in information from the school-based and project supported SOARS coordinator. The participating teachers implemented the curriculum and encouraged students to participate in the school-wide safety campaign. Students mounted campaigns under the supervision of school staff. Parents, all staff, and all students had access to the informational materials posted to the *Advocatr* website.

Table 11: Internal Reliability of Pilot Outcome Measures

| | Pretest α | Posttest α | Items |
|-------------------------|---------------------|----------------------|-------|
| STAFF MEASURES | | | |
| Student Intervention | .807 | .830 | 5 |
| Staff Intervention | .908 | .899 | 5 |
| Aggression Problem | .872 | .852 | 5 |
| Bully Prevention | .939 | .950 | 8 |
| Student Relationships | .877 | .882 | 7 |
| Gender Equity | .820 | .852 | 5 |
| STUDENT MEASURES | | | |
| Connection | .940 | .937 | 19 |
| Delinquency | .887 | .886 | 8 |
| Disruption | .877 | .877 | 7 |
| Personal Safety | .834 | .831 | 8 |
| Bully Perpetration | .932 | .939 | 9 |
| Peer Victimization | .921 | .875 | 9 |
| Promote School Safety | .854 | .863 | 5 |
| PARENT MEASURES | | | |
| Student Intervention | .858 | .856 | 5 |
| Staff Intervention | .936 | .902 | 5 |
| Aggression Problem | .921 | .919 | 5 |
| Bully Prevention | .972 | .962 | 8 |
| Student Relationships | .906 | .923 | 7 |
| Gender Equity | .831 | .882 | 5 |

As in the field test, students completed the *Safe School Survey* and the *Peer Experiences Questionnaire*. All school staff to completed the *Teacher and Staff School Environment Survey*. Parents completed the *Parent School Environment Survey*, which was identical to the teacher measure but focused on the perspective of parents. Table 11 provides an overview of the internal reliability coefficients of all measures’ domains.

Data analysis

We examined *Advocatr* use by overall frequency as well as across student race and gender. Data from surveys completed by students, parents, and staff were analyzed using an ANCOVA analytic approach. The ANCOVA analysis examined differences in each outcome at post-test while controlling for differences between intervention and control groups at pre-test.

While the main analysis reported used only participants that completed both pre and post-test (n = 201 student), we conducted a series of sensitivity analyzes using Full Information Maximum Likelihood (FIML) and a structural equation modeling approach using all data available. All models using FIML showed the same significant relationships as the ANCOVA design strengthening the validity of the findings. Partial Eta^2 effect sizes were reported for each outcome. Eta^2 of .14, .06, and .01 are considered large, medium, small effect sizes, respectively (Cohen, 1988).

Findings

Students' use of *Advocatr* was likely affected by the school closures beginning in March 2020. School closures removed students from the classroom and school environments, increased their stress levels, and disengaged many students from school. Therefore, we report *Advocatr* usage data only for the fall semester of the 2020-21 school year. In school A during the fall 2019 semester, 0.93% of students reported safety concerns (Something Wrong), and 3.09% of students reported positive behavior (Something Right). Overall, 4.03% of students used *Advocatr*. In school B, 0.91% of students reported safety concerns (Something Wrong) and 0.82% of students reported positive behavior (Something Right). Overall, 1.81% of students used *Advocatr*. Table 12 above provides an overview of both intervention schools' enrollment and

Table 12: Percent of Enrollment and Percent of *Advocatr* reports by race/ethnicity and gender for School A and School B

| | School A Enrollment | Something Wrong Reports | Something Right Reports |
|---------------|---------------------|-------------------------|-------------------------|
| AmInd/AlasNat | 1.5 | 0 | 4.17 |
| Asian | 1.1 | 0 | 0 |
| PacIs/NatHaw | 0.8 | 0 | 0 |
| AfrAm/Black | 1.4 | 12.5 | 2.08 |
| Hispanic | 31.4 | 31.25 | 20.83 |
| White | 56.2 | 50 | 64.58 |
| Multiracial | 7.5 | 6.25 | 8.33 |
| Male | 51.7 | 31.35 | 47.92 |
| Female | 47.9 | 68.75 | 52.08 |

| | School B Enrollment | Something Wrong Reports | Something Right Reports |
|---------------|---------------------|-------------------------|-------------------------|
| AmInd/AlasNat | 1.4 | 0 | 0 |
| Asian | 5.1 | 0 | 0 |
| PacIs/NatHaw | 1 | 0 | 0 |
| AfrAm/Black | 36.8 | 21.43 | 25 |
| Hispanic | 14 | 7.14 | 8.33 |
| White | 34.5 | 57.14 | 58.33 |
| Multiracial | 7.1 | 14.29 | 8.33 |
| Male | 52.5 | 35.71 | 41.67 |
| Female | 47.5 | 64.29 | 58.33 |

Advocatr reports by race/ethnicity and gender.

Results from the parents and staff surveys did not showed any significant differences in the outcomes at post-test between the intervention and control groups.

However, significant differences were detected for the student report in the desired direction.

Students in the intervention condition reported higher connection with students and staff in their schools ($F = 7.05, p < .01, Eta^2 = .035$) and a higher sense of personal

safety ($F = 8.76, p < .01, Eta^2 = .043$) than those in the control conditions. Additionally, intervention students reported lower levels of disruption ($F = 6.45, p < .05, Eta^2 = .032$) than students in the control conditions. However, students in the intervention were not significantly different from those in the control groups when comparing levels of delinquency, bullying perpetration, peer victimization, or promoting school safety at post-test (see Table 13 above).

Table 13: Student Report: Pretest-Posttest Descriptive Statistics and ANCOVA Results for Condition Effects controlling for pretest. $N = 201$.

| Measure / condition | Pretest M (SD) | Posttest M (SD) | F test | p -value | n | Partial Eta^2 |
|--|------------------|-------------------|-------------|-------------|-----|-----------------|
| Connection | | | 7.05 | .009 | 200 | .035 |
| Treatment | 3.45 (0.62) | 3.68 (0.48) | | | | |
| Control | 3.40 (0.63) | 3.50 (0.62) | | | | |
| Delinquency | | | 0.27 | .605 | 200 | .001 |
| Treatment | 3.21 (0.81) | 3.24 (0.77) | | | | |
| Control | 3.28 (0.87) | 3.33 (0.86) | | | | |
| Disruption | | | 6.45 | .021 | 200 | .032 |
| Treatment | 3.48 (0.73) | 3.35 (0.68) | | | | |
| Control | 3.63 (0.73) | 3.65 (0.77) | | | | |
| Personal Safety | | | 8.76 | .003 | 200 | .043 |
| Treatment | 3.75 (0.62) | 3.90 (0.58) | | | | |
| Control | 3.52 (0.72) | 3.55 (0.69) | | | | |
| Bully Perpetration | | | 2.15 | .144 | 191 | .011 |
| Treatment | 1.28 (0.64) | 1.18 (0.48) | | | | |
| Control | 1.23(0.46) | 1.26 (0.53) | | | | |
| Peer Victimization | | | 3.83 | .052 | 192 | .020 |
| Treatment | 1.31 (0.48) | 1.23 (0.45) | | | | |
| Control | 1.45 (0.61) | 1.43 (0.64) | | | | |
| Promote School Safety | | | 2.27 | .134 | 197 | .012 |
| Treatment | 2.97 (0.73) | 3.06 (0.75) | | | | |
| Control | 3.21 (0.63) | 3.04 (0.69) | | | | |
| <i>Note.</i> Eta-square of .14, .06, and .01 are considered large, medium, small effect sizes, respectively (Cohen, 1992). | | | | | | |

School-wide Supplementary Initiatives in Oregon and Illinois to Enhance Outcomes

Students in the intervention schools in these sites mounted successful school-wide safety campaigns respectively in support of the concepts on which *Advocatr* is built. Each is briefly described below.

In the Oregon intervention school, the “Growing Kindness” campaign was created to promote kindness on a school-wide basis. In this campaign, a student leadership team worked with the school’s Positive Behavior Interventions and Supports (PBIS) coordinator to create a kindness campaign. At the Illinois site, the Upstander Advocacy Group was formed to promote school-wide advocacy for student safety.

The “Growing Kindness” campaign focused on norming prosocial behaviors through encouraging students to recognize peers for acts of kindness. Students created a kindness tree in the school’s common area, and encouraged students to write acts of kindness they witnessed on “kindness leaves” which were then posted on the tree. Each week, the leaves were entered into a drawing for small prizes. The campaign began in late February and its goal was to reach 400 acts of kindness by the end of the year. When schools closed due to the pandemic one week prior to spring break, students had gathered 340 kindness leaves. Students also created a video describing the campaign, its rationale, and interviewing school staff about the importance of recognizing others’ acts of kindness.

In Illinois, the Upstander group at the intervention school participated actively in many aspects of this five-year project and started meeting in November 2017 with sessions scheduled bi-weekly at one high school and monthly at the other high school during all school lunch periods. Lunch meetings gave every student an opportunity to be a part of the group, and effectively resulted in three or four strands of conversation and activity among the UPstanders

student participants. Behavior Specialists, and Project Manager facilitated meetings, and there were typically between five and twelve students in attendance during each of the lunch periods. Student demographics--including age, race, academic track, and SES--were varied. UPstander meetings were used to teach students about the school's partnership with the SOARS project, and about the upcoming *Advocatr* app. Students were recruited largely from the group to participate in UAT 3. During fifty-minute meetings, many student-led conversations about current school climate focused on physical and emotional safety at UHS, and included what the students believed could be improved upon. Students began to brainstorm ways that school climate could be improved, and how feeling positive about school could be made a priority. Ideas ranged from instituting hallway behavior campaigns, to painting murals, to producing short videos for the beginning of the next school year to introducing students to social workers, counselors, and other emotional/behavioral support staff. There was much student-generated focus on creating and developing ways to systematically change the existing school culture.

As the group developed, both students and administrators began to see the UPstander group as a valuable resource. For example, at the beginning of April, one school experienced the loss of a student due to suicide. Administrators immediately reached out to the Behavior Specialist with hopes of tapping into existing student/staff relationships. They saw UPstanders as a way to help spread the word about counseling resources available to students who may need them. Several of the UPstander students perceived ties between suicide prevention/mental health and the mission of the UPstander group, and their dedication to serving their school community increased.

Once the *Advocatr* app was available, the UPstander group at the Illinois school responded to *something right* reports made through the *Advocatr* app. Involving students

in reviewing positive reports began to generate more interest in the *something right* component of the app over the course of this project. In the last two years, the UPstander group delivered handwritten thank-you notes to students who were named by reporters, and at the end of the month conducted a drawing for a gift-card from the pool of *something right* reports, which was announced during morning announcements. Only the names of students that the reports were made about were revealed to the group; the names of *something right* reporters remained confidential.

Other Development Activities

Throughout the project's duration, the research team worked closely with a unified Advisory Board (AB) that was composed of individuals from the community with deep knowledge, experience, and expertise in the areas of school leadership, management and administration, school safety, social service agencies serving at-risk youth, the juvenile court, youth development services, management of school-based research, police, mental health, and family perspectives. For example, the chair of the AB, Doug Harclerod, is currently the Executive Director of the Oregon District Attorneys Association after having served as District Attorney for Lane County, Oregon for 23 consecutive years. The AB met twice a year to review project products and outcomes and provide guidance for next steps.

IMPLICATIONS FOR CRIMINAL VIOLENCE POLICY AND PRACTICE

The findings from Project SOARS have helped clarify the context in which current school safety policies and practices operate and have offered promising evidence for alternatives to current practice. Current approaches to school safety include statewide tiplines and promoting a positive and inclusive school climate where students feel comfortable reporting safety threats (National Threat Assessment Center, 2019). Both of these components were investigated as part

of the SOARS project.

Current evidence suggests that state-wide tiplines are used by very few students. Based on statewide enrollments and tipline use data, usage rates vary from approximately 2.18% of students for firmly established tiplines (see Colorado’s *Safe2Tell*, <https://safe2tell.org/sites/default/files/u113/18.19.annual.report.FINAL%20102819.pdf>) to approximately 0.19% of students for newly created tiplines (see Oregon’s *SafeOregon*, <https://www.safeoregon.com/wp-content/uploads/2019/12/SafeOregon-Sept-2019-Nov-2019-Data-Report1.pdf>). While tiplines are recommended as an important tool to gather information about potential school safety threats, the Office of Justice Program’s National Criminal Justice Reference Service states: “Tip lines are promising, but much is still unknown about their effectiveness” (Planty, et al., 2018, p.1).

Our initial formative research with focus groups emphasizes the impact a deeply ingrained anti-snitching culture has on students’ willingness to report safety threats. Given that anti-snitching culture is rooted in distrust of authorities, we can expect that adolescent students would be hesitant to use statewide tiplines that transfer information directly to the state police. *Advocatr*, as described herein, offers a promising alternative to traditional tiplines. First, it keeps reports locally held by transmitting information to school personnel, where they can be addressed, rather than to external authorities. Second, it allows students to focus on prosocial behavior as well as safety threats. Promoting students’ awareness of positive behaviors as well as negative behaviors of concern might contribute to creating a more positive school culture. *Advocatr* usage data collected during Phase 4 suggest that students value the opportunity to report positive behaviors, and—similarly—that they felt comfortable sharing concerning behaviors with their local school personnel.

Practices to support a positive and welcoming school climate, such as PBIS (Horner &

Sugai, 2015) and social-emotional learning (Weissberg et al., 2015) tend to be easier to implement and more effective at the elementary than the secondary school level, due to adolescent students' desire for autonomous decision-making and sensitivity to peer pressure (Flannery et al., 2013; Dusenbury et al., 2014). However, we were gratified at how enthusiastically students participated in the Oregon and Illinois Kindness and Upstander school-wide campaigns to promote a culture of kindness, support and safety in their schools.

Our findings suggest students' willingness to report depends on the quality of relationships they have with teachers, and on school personnel's capacity to respond in a non-punitive manner deemed appropriate by students. The SOARS framework embeds access to a reporting tool with a curriculum focused on relationship building through noticing and promoting pro-social behavior as well as restorative conflict resolution, as well as a student-driven campaign focused on positive behavior and kindness. These framework components likely contributed to further improving students' sense of school belonging and personal safety. Providing students with the time, space, and language to talk about their experiences in school and how to advocate for their own and others' physical and emotional safety might promote trusting relationships between staff and students and among peers as a pre-requisite to students' willingness to share safety information.

The quality of student-teacher relationships likely also depends on teachers' capacity to respond appropriately to student concerns. While the SOARS framework emphasizes restorative practices in its curriculum, providing school personnel with additional training in restorative practices might be necessary to improve their relationship building capacity and ability to respond appropriately to student concerns. A two-pronged approach, merging student access to *Advocatr* with teacher access to restorative training might be beneficial to promote students'

willingness to report safety concerns.

Our own research as well as the existing literature on student reporting has highlighted snitching as a major, very strong barrier to making one's concerns about safety known to school authorities. It is essential that the research on this topic be expanded as it poses a serious risk to the safety of today's schools and students.

Project SOARS has demonstrated that a comprehensive approach to school safety that allows adolescent students to make their voices heard within a school community that promotes trust between students and adults as well as among peers creates a better connection with schooling. As shown by the seminal research of Hawkins, et al. (1999), increased bonding and engagement with schooling serves as a protective factor against a host of long-term, negative developmental outcomes. The SOARS project may well serve a similar function in the lives of our students. SOARS has also demonstrated that the effectiveness of tools like *Advocatr* might be enhanced by simultaneously training school staff in restorative approaches to conflict resolution and relationship building. These outcomes can, in turn, lead to a more positive school climate in which students are more likely to report their concerns. Strong and trusting relationships are fundamental to students' willingness to share such critical safety information.

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