

The Impact of a Brief, Bullying Bystander Intervention on Depressive Symptoms

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### Abstract

Researchers evaluated the impact of a brief, bystander bullying intervention (STAC) on depressive symptoms among high school students using a randomized controlled design. Results of path analyses provided support for a mediational model in which the intervention was associated with an increase in sense of school belonging, which in turn was associated with a reduction in depressive symptoms. We discuss implications for high school counselors and counselors in other settings working with adolescents.

*Keywords:* bullying, bystander, STAC, depressive symptoms, sense of school belonging

### The Impact of a Brief, Bullying Bystander Intervention on Depressive Symptoms

National survey data indicate among students age 12-18, 20.8% report being bullied at school and 11.5% report being victims of cyberbullying (U.S. Department of Education, 2016). Although school bullying peaks during middle school, bullying continues through high school, with 17.9% of high school students reporting being bullied on school property (U.S. Department of Education, 2016). Further, rates of cyberbullying increase from middle school to high school, with the highest rates of cyberbullying reported by seniors (18.7%) (U.S. Department of Education, 2016). Additionally, statistics indicate that 70.6% of students report witnessing bullying (Bradshaw, Sawyer, & O'Brennan, 2007), suggesting that the impact of school bullying extends beyond those who are directly victimized to the majority of the student body.

#### **Witnessing Bullying and Depressive Symptoms**

Although statistics indicate that far more students report witnessing bullying than being either a perpetrator or target of bullying, the majority of researchers examining the impact of bullying behavior have focused on outcomes for students who are targets or perpetrators of bullying (Rivers, Poterat, Noret, & Ashurst, 2009). Problems associated with bullying, however, extend beyond students directly involved in bullying to those who witness bullying (Hutchinson, 2012; Janson, Carney, Hazler, & Oh, 2009; Rivers & Noret, 2010; Rivers & Noret, 2013; Rivers et al., 2009). Researchers have revealed that being exposed to bullying in adolescence is a traumatic experience that is associated with emotional distress, including sadness, helplessness (Janson et al., 2009), and guilt (Hutchinson, 2012). Among high school students, witnessing bullying as a bystander significantly predicts multiple indicators of psychological distress, including depressive symptoms, even when accounting for prior victimization (Rivers et al., 2009). High school students who witness bullying are also significantly more likely to report

symptoms of helplessness (Rivers & Noret, 2013) and suicidal ideation (Rivers & Noret, 2010; Rivers & Noret, 2013) relative to students who are not involved in bullying. Thus, the limited research on psychological correlates for students who witness bullying suggests that bystanders experience significant emotional distress, with a convergence of data indicating high school students who witness bullying are at risk for depressive symptoms, including sadness, helplessness, guilt, and suicidal ideation. For these reasons, it is imperative to identify efficacious interventions for high school students who witness bullying to address depressive symptoms associated with being a bystander.

### **Sense of School Belonging**

Sense of school belonging has been defined as having positive relationships with peers and adults and feelings of safety and belonging in the school environment (Libbey, 2004). Sense of school belonging is closely related to constructs such as school connectedness, described as the extent to which students feel accepted, respected, included and supported at school (Goodenow, 1993). Students who have a strong sense of school belonging (Duggins, Kuperminc, Henrich, Smalls-Glover, & Perilla, 2016; Raskauskas, Gregory, Harvey, Rifshana, & Evans, 2010) and positive relationships with teachers (Raskauskas et al., 2010) report lower level of being the targets of bullying. Additionally, students who have a positive perception of teachers and school staff are more willing to seek help for bullying (Eliot, Cornell, Gregory, & Fan, 2010), whereas students who perceive the school environment as negative are less willing to seek help when bullying occurs (Klein, Cornell, & Konold, 2012).

Researcher have found that being exposed to bullying as a bystander is related to feelings of isolation (Hutchinson, 2012). Specifically, bystanders report that witnessing bullying is associated with a sense of being cut off by their peers and that they experience a sense of

disconnectedness when they do not intervene (Hutchinson, 2012). Sense of school belonging (Shochet, Smith, Furlong, & Homel, 2011) and school connectedness (Langille, Rasic, Kisely, Gordon, & Flowerdew, 2012; Lester, Waters, & Cross, 2013; Millings, Buck, Montgomery, Spears, & Stallard, 2012) are also inversely associated with depression among adolescents. Research indicates that when bystanders act to defend targets, they report decreased loneliness, increased feelings of social support (Olenik-Shemesh et al., 2015), higher levels of social acceptance, and lower levels of social rejection (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Thus, one of the reasons bystanders may experience depressive symptoms is because witnessing bullying without acting to defend the target is associated with low levels of sense of school belonging, including feelings of isolation and disconnection, as well as low levels of social support and acceptance.

### **The Role of the Bystander**

Researchers have found that many students do not intervene because they do not know what to do to stop bullying (Forberg et al., 2014; Hutchinson, 2012). Researchers have identified four distinct bystander roles that include “assistants” who join in with the perpetrators, “reinforcers” who provide positive feedback to the perpetrator, “outsiders” who are disengaged and either leave the situation or observe from a distance, and “defenders” who intervene on behalf of the target of bullying (Salmivalli et al., 1996). Of these roles, only the “defender” role is associated with a decrease in bullying behavior. Specifically, researchers have found that when bystanders defend the target, not only does bullying behavior decrease (Hawkins, Pepler, & Craig, 2001; Padgett & Notar, 2013; Salmivalli, Voeten, & Poskiparta, 2011; Salmivalli, 2014), but bystanders experience positive social-emotional outcomes (Williford, Boulton, Noland, Little, Karna, & Salmivalli, 2012). Therefore, providing bystander interventions that

help students act as “defenders” when they witness bullying may increase sense of school belonging, thereby protecting against depressive symptoms associated with witnessing bullying.

### **Bystander Interventions**

Training bystanders to intervene is an important component of school-based bullying programs (Porter & Smith-Adcock, 2017; Polanin, Espelage, & Pigott, 2012). The few comprehensive, school-wide programs that incorporate bystander interventions, however, have been normed on middle school or elementary school children within the context of the classroom setting (Denny et al., 2015). Because high school students move classrooms throughout the day, there is a need to “re-think” bystander programs originally developed for younger children (Denny et al, 2015). Additionally, comprehensive programs typically require significant resources including training all students, teachers, staff, administration, and parents, up to 15 hours of classroom instruction (Menard & Grotzinger, 2014), and having access to a licensed educational expert (Kiva Antibullying, 2014). Because of the resources needed to implement school-wide programs, “aging-up” brief, bullying bystander interventions may be a promising approach for high school students.

### **The STAC Program**

The STAC program, which stands for “stealing the show,” “turning it over,” “accompanying others,” and “coaching compassion” is a brief, stand-alone bystander program that teaches students to become advocates against bullying by training bystanders to intervene as “defenders” (Midgett, Dumas, Sears, Lundquist, & Hausheer, 2015). A unique feature of the STAC program is that it was designed to establish school counselors as leaders in program implementation, enhancing the role of the school counselor in promoting school-wide initiatives that foster a safe learning environment (American School Counselor Association [ASCA], 2012).

The authors developed the STAC program as a brief bullying bystander intervention for the middle and elementary school level. The program includes a 90-minute training with bi-weekly, 15-minute small group follow-up meetings, placing a low demand on schools for implementation (Midgett, Dumas, Trull, & Johnston, 2017c). Findings from preliminary studies indicate the STAC program is effective in increasing students' knowledge and confidence to intervene as "defenders" (Midgett et al., 2015; Midgett & Dumas, 2016; Midgett, Dumas, & Trull, 2017a). Further, researchers have demonstrated that the STAC program is effective in increasing self-esteem (Midgett et al., 2017a) and decreasing anxiety (Midgett et al., 2017c) among elementary and middle school students trained in the program.

### **Modifying the STAC Program for High School Students**

Research indicates compared with younger children, bullying at the high school level is more complex, including cyberbullying (Parris, Varjas, Meyers, & Cutts, 2011), group bullying, and bullying in dating or romantic relationships (Pepler, et al., 2006). Thus, "aging-up" programs for high school students includes addressing specific types of bullying that are prevalent among older students. In order to "age-up" the STAC program for the high school level, the authors conducted a qualitative study to gather information from high school students regarding how the researchers needed to modify the original STAC intervention to be appropriate for the high school level (Midgett, Johnston, Trull, Dumas, & Miller, 2017d).

Based on focus group data, the authors modified the content of the STAC program by incorporating the following into the didactic and role-play components of the training: a) cyberbullying through social media and texting, b) group bullying, and c) bullying in dating and romantic relationships. The authors also changed the language to be developmentally appropriate (e.g., breaks vs. recess) and to include common locations where bullying occurs

(e.g., school parking lot vs. the school bus). Further, the authors modified examples of physical bullying to reflect covert behaviors such as “shoulder checking,” “backpack checking,” and “tripping in the hallways” instead of physical fights which students indicated happens more frequently among elementary and middle school students. Results from a mixed-methods study examining the appropriateness of the modified version of the STAC program for high school students indicated students reported increased knowledge and confidence to intervene, increased awareness of bullying, and utilized the STAC strategies. Further, findings from focus groups revealed that students felt a sense of responsibility and empowerment to act on behalf of targets and that the STAC strategies seemed like a natural fit for intervening (Midgett et al., 2017b).

### **The Current Study**

Despite the compelling need to provide programs that can positively impact students who witness bullying in high school, researchers generally conduct bullying intervention research with elementary school and middle school students (Denny et al., 2015). Further, the majority of researchers studying bystander programs focus on the reduction of school-wide bullying rather than examining the impact of these interventions on the bystanders themselves (Jansen et al., 2009). The limited research studying the impact of bystander interventions on bystanders suggests that bystander interventions can improve positive socio-emotional outcomes among bystanders in elementary (Midgett et al., 2017a) and middle (Midgett et al., 2017c) school. To date, however, there is no research that we could find investigating the impact of bystander interventions the socio-emotional outcomes for high school students. This gap poses a significant barrier to reducing the negative consequences among high school students who witness bullying, including depressive symptoms.

The purpose of this study is to extend the literature by evaluating the “aged up” STAC bullying bystander program on socio-emotional outcomes for high school students trained to act as “defenders” when witnessing bullying behavior. Our first aim was to investigate the impact of the STAC intervention on decreasing depressive symptoms. Our second aim was to examine sense of school belonging as a mediator of intervention effects. To achieve these aims, we randomly selected high school students using a stratified sampling procedure and then randomly assigned students to the intervention or control group. We hypothesized that (a) participation in the intervention group would be associated with a decrease in depressive symptoms and (b) sense of school belonging would mediate intervention effects such that the intervention would indirectly impact depressive symptoms through an increase in sense of school belonging.

## **Methods**

### **Research Design**

We used a randomized controlled trial design within one high school. We randomly selected students using a stratified sampling procedure by race, gender, and year in school as we were interested in representing the school’s demographic characteristics. In terms of race, our goal was to recruit 146 students who identified as White, 30 as Latino/a, 10 as Asian, Hawaiian or Pacific Islander, 8 as African American or Black, and 6 who identified as other or two-races. We sought to recruit 106 males and 94 females and 63 12<sup>th</sup> and 63 11<sup>th</sup> graders and 74 10<sup>th</sup> graders. We then randomly assigned students to either the STAC intervention condition or the assessment-only control condition. All participants completed baseline and 30-day follow-up assessment surveys. All study procedures were approved by the University Institutional Review Board and the School District Research Board.

## Participants

The research team recruited 200 participants from one urban, public high school in the Northwest. We received parental consent and student assent from 57 students (28.5%). Of the 42 (21.0%) students who were present for the baseline assessment, 22 (52.4%) were randomized to the intervention group and 20 (47.6%) were randomized to the control group. The final sample of 42 included 61.9% females and 38.1% males enrolled in 10th ( $n = 11$  [26.2%]), 11th ( $n = 20$  [47.6%]), and 12th ( $n = 11$  [26.2%]) grade. Participants' ages ranged from 15-18 years old ( $M = 16.68$  and  $SD = .91$ ), with reported racial backgrounds of 58.5% White, 17.1% Hispanic, 14.6% Asian American, and 9.8% African-American.

## Procedure

The school counselor provided the researchers with a list of all students enrolled at the school. The researchers randomly selected students to participate utilizing a randomized stratified sampling procedure. A counseling aid provided the selected students with a slip during classtime notifying them they were selected and inviting them to speak with the school counselor or a research team member if they were interested in learning more about the project. The counselor or team member met briefly with students who expressed interest to discuss the research project and provide an informed consent form to be signed by a parent or guardian and returned to the school. A team member followed up with students who did not return the parent or guardian informed consent form via email and obtained permission from the school counselor to email parents providing a brief explanation of the study and an informed consent form. A team member then met with each of the students who had parental consent to explain the research in more detail and obtain student assent.

All participants completed baseline (the fourth week of February) and 30-day follow-up (the fourth week of March) assessments in the school's auditorium. After completing the baseline survey, the students in the intervention group completed a 90-minute training program during classroom time. Students in the control group returned to their classrooms. Graduate students in a masters in counseling program conducted the training in the school's career center. Students in the intervention group also completed a brief questionnaire immediately after the 90-minute training to assess knowledge acquisition. Following the training, students in the intervention group participated in two, bi-weekly 15-minute small group follow-up meetings by grade level with counseling graduate students prior to the 30-day follow up. The researchers provided all participants with a "pizza party" after conducting the 30-day follow-up assessment. The research protocol did not include providing the intervention to the students in the control group at the end of the study procedures.

## Measures

**Sense of School Belonging.** Sense of school belonging was measured using the Psychological Sense of School Membership (PSSM; Goodenow, 1993). The PSSM is comprised of 18 self-report items that measure students' perception of belonging to their school. Examples include: "People notice when I am good at something," "I am treated with as much respect as other students," and "Teachers here are not interested in people like me." Items are rated on a 5-point Likert Scale ranging from *Not at All True* to *Completely True*. Five items were reverse scored with all items summed to create a total scale score. Overall, the PSSM has well established concurrent and predictive validity, as well as supported factor structures (You, Ritchey, Furlong, Shochet, & Boman, 2011). Researchers have also reported test-retest reliability for the PSSM over a 4-week period of .78 (Hagborg, 1994) and .56 - .60 over a 12-month period

(Shochet, Dadds, Ham, & Montague, 2006). Reported coefficient alphas range from .78 - .95 (You et al., 2011). For this sample, Cronbach's alpha was  $\alpha = .89$ .

**Depressive Symptoms.** Depressive symptoms were measured using the Depression Scale of the Behavioral Assessment Scale-3 Self Report of Personality-Adolescent Form (BASC-3 SRP-A; Reynolds & Kamphaus, 2015). The BASC-3 is a multimethod and multidimensional instrument that includes behavioral and emotional screeners (BESS), teacher (TRS) and parent rating scales (PRS), self-report of personality (SRP), structured developmental history (SDH), student observation system (SOS), as well as other components. We used the Depression Scale, which is one of several scales comprising the self-report of personality (SRP) component of the BASC-3. The scale is comprised of 12 items measuring symptoms of depression, including feelings of unhappiness, sadness, and stress that may result in an inability to carry out everyday activities or may bring on thoughts of suicide (Reynolds & Kamphaus, 2015). Five items are rated on a dichotomous scale, 1 (*True*) or 2 (*False*). Example items include: "I don't seem to do anything right," "I just don't care anymore," and "I used to be happier." Seven items are rated on a 4-point Likert Scale ranging from 1 (*Never*) to 4 (*Almost Always*). Examples include: "I feel depressed," "I feel life isn't worth living," and "I feel like I have no friends." The total scale score was obtained through the BASC-3 SRP-A hand-scoring worksheet (Reynolds & Kamphaus, 2015). The BASC-3 SRP-A Depression scale has reliability coefficient alphas ranging in the .80s for males and females, and evidence of construct validity with correlations ranging from .51 - .93 between the Depression scale and other established measures including the SRP-A BASC-2, ASEBA, and the Beck Youth Inventories II (BYI) (Reynolds & Kamphaus, 2015). For this sample, Cronbach's alpha was  $\alpha = .88$ .

### **The STAC Intervention**

The STAC intervention includes a 90-minute training that provides information about bullying and trains students in the four STAC strategies: “stealing the show,” “turning it over,” “accompanying others,” and “coaching compassion” (for details, see Midgett et al., 2015). The intervention also includes two 15-minute group meetings over the next 30 days to reinforce students’ learning of the strategies and brainstorm ways to become more effective “defenders.” The STAC intervention, initially designed for middle and elementary school students, was modified to be developmentally appropriate for the high school level (Johnston, Midgett, & Dumas, 2017b; Midgett et al., 2017d).

**Didactic Component.** The didactic component included ice-breaker exercises, an audiovisual presentation, a video about bullying, and hands-on activities to engage students in the learning process. Students learned about (a) the complex nature of bullying in high school often involving group dynamics rather than a single individual, (b) different types of bullying with a focus on cyberbullying and covert physical bullying, (c) characteristics of students who bully, including the likelihood they have been bullied themselves, to foster empathy and separate the behavior from the student, (d) negative associated consequences of bullying for students who are targets, perpetrate bullying, and are bystanders, (e) bystander roles and the importance of acting as a “defender,” and (f) the STAC strategies used for intervening in bullying situations. The four STAC strategies are described below.

*“Stealing the Show.”* “Stealing the show” involves using humor or distraction to turn students’ attention away from the bullying situation. Trainers teach bystanders to interrupt a bullying situation to displace the peer audience’s attention away from the target (e.g., tell a funny joke, initiate a conversation with the student who is being bullied, or invite peers to play a group game such as basketball).

*“Turning it Over.”* “Turning it over” involves informing an adult about the situation and asking for help. During the training, students identify safe adults at school who can help. Students are taught to always “turn it over” in the case of overt physical bullying or cyberbullying or if they are unsure as to how to intervene. Additionally, trainers talked about the importance of immediate documentation of social media posts that are intended to humiliate or hurt students. Students learned about the need to document over time for authorities (i.e., school principal and resource officer) to take action.

*“Accompanying Others.”* “Accompanying others” involves the bystander reaching out to the student who was targeted to communicate that what happened is not acceptable, that the student who was targeted is not alone at school, and that the student bystander cares about them. Trainers teach students to approach a peer after they were targeted inviting them to spend time together (e.g., going for a walk during break, joining a game of basketball, or sitting with them during lunch). “Defenders” learn they can ask peers who were targeted if they would like to talk about what happened, or “defenders” can implement this strategy indirectly by spending time with the student who was targeted communicating empathy and support.

*“Coaching Compassion.”* “Coaching compassion” involves gently confronting the student who bullies either during or after a bullying incident to indicate this type of behavior is unacceptable. Additionally, the bystander encourages the student who bullied to consider what it would feel like to be the target in the situation, thereby raising awareness and fostering empathy toward the target. Trainers teach bystanders to implement “coaching compassion” when they have an established relationship with the student who bullied or if the student who bullied is in a younger grade and bystanders believe they will have the student’s respect.

**Role-Plays.** Trainers divided students into small groups to practice utilizing the STAC

strategies. Role-plays included hypothetical bullying situations that students can encounter in high school. For example, trainers provided students with the following scenario: “Your friends are hanging out at your house after school, looking through Twitter. One friend decided to follow someone from school that they do not like, and then repost one of their posts to make fun of them. This is not the first time your friend has done something like this.”

**Training Conclusion.** The training concluded with the small groups coming together and each student sharing his or her favorite STAC strategy, signing a petition indicating “bullying stops with me,” and receiving a certificate of participation.

**Post-Training Groups.** Students who participated in the STAC training met with two graduate students for two bi-weekly, 15-minute group meetings per grade level after the training was conducted. During these meetings, trainers helped students recall the STAC strategies, discussed with students which strategies they had utilized, and whether or not they seemed to be effective in stopping bullying. Further, trainers answered and helped students brainstorm effective ways to implement the strategies, use more than one strategy to intervene, and, when appropriate, to work as a team to intervene during or after a bullying incident.

### **Intervention Fidelity**

The researchers created a STAC training video to train all graduates student involved in the project to conduct the STAC program. All students watched the training video prior to conducting the STAC intervention. The first author was also present at the 90-minute training to ensure it was accurately delivered. The first author rated the training on a dichotomous scale, *Yes* or *No*, to evaluate whether presenters accurately taught the definition and types of bullying, the STAC strategies, and whether they deviated from training materials. Furthermore, the researchers evaluated if student trainers conducted all role-plays included in the training. Of the

two presenters conducting the training, 100% accurately taught the definition and types of bullying and the STAC strategies, there was 100% adherence to the training materials, and presenters conducted all four role-plays in 100% of the trainings. Additionally, the researchers developed a standard set of scripted questions used for the 2, 15-minute follow-up meetings.

We also examined changes in knowledge and confidence and use of the STAC strategies to determine if students learned and retained the information presented in the STAC training. Results indicated a significant increase in knowledge and confidence from baseline to post-training,  $t(22) = -6.52, p < .001$ , Cohen's  $d = -1.45$ , and between baseline and the 30-day follow-up  $t(22) = -4.96, p < .001$ , Cohen's  $d = -1.07$ . Among students who indicated they witnessed bullying in the past month (63.6%,  $n = 14$ ), 100% reported using at least two STAC strategies in the past month, and 86% reported using at least three STAC strategies in the past month.

### **Power Analysis**

We reviewed guidelines for sample sizes for mediational design using path analyses to determine the adequacy of our sample size. Sample size guidelines suggest that path models composed of single indicators require fewer participants than the equivalent SEM models with latent variables (Wolf, Harrington, Clark, & Miller, 2013). Using a Monte Carlo simulation model (Muthén & Muthén, 2002), Wolf et al. (2013) demonstrated that for a path analysis model with three variables, samples as small as 50 - 70 can have power  $> 80%$  ( $\alpha = .05$ ) to detect small direct and indirect effect sizes in mediational models. Similarly, Thoemmes, MacKinnon, and Reiser (2010) provide power estimation tables using the Monte Carlo method. According to tables provided by Thoemmes et al. (2010), the required sample size to detect a mediated effect with power of .80 ( $\alpha = .05$ ) for a single mediator model with dichotomous treatment assignment is  $N = 42$ . Because smaller sample sizes are required for models that use reliable measure,

estimate measurement error, and have fewer amounts of missing data (Wolf et al., 2013), our sample size of 42 should be adequate to detect medium to large effect sizes with power  $\geq 0.80$  with an alpha level of .05.

### **Statistical Analysis**

Prior to analysis, we examined variables for outliers at baseline and follow-up assessments and adjusted outliers by trimming the values of variables that were greater than 3.3 SD above the mean to 3.3 SD above the mean for that variable (Tabachnik & Fidell, 2007). We also conducted analyses to assess for multicollinearity using the VIF rule-of-thumb of  $VIF < 10$  (Erford, 2008, 2014; Tabachnick & Fidell, 2007). We examined the data for missing values and imputed missing data using maximum likelihood (ML) estimation (Byrne, 2001). We confirmed that students in the intervention and control groups were equivalent with respect to demographics and baseline outcomes with *t*-tests for continuous variables and chi-square tests for categorical variables. We then conducted two path analyses using AMOS 25.0 with the maximum likelihood estimation method to evaluate model fit and to examine direct and indirect relationship between intervention group and depressive symptoms. We used three goodness of fit indices to assess model fit: chi-square, the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Good model fit is demonstrated when the model chi-square is not significant, the CFI value is .95 or greater, and the RMSEA value is .06 or less (Hu & Bentler, 1999). We used an alpha level of  $p < .05$  to determine statistical significance.

First, the direct effect of the intervention on depressive symptoms, without the hypothesized mediator in the model, was tested (i.e., the total effect) (Shrout and Bolger, 2002). To test for mediation, we used the joint significance test of indirect paths from the

intervention to the mediator (i.e., sense of school belonging), and from the mediator to the outcome (i.e., depression) (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). We used bias-corrected bootstrapping in which indirect effects are estimated from multiple resampling from the data set (MacKinnon, 2008). Confidence intervals that do not include zero indicate significance of the indirect effect (Preacher & Hayes, 2008). We derived confidence intervals (CIs) using bootstrapping procedures. In this study, we tested the indirect effect with 5000 bootstrap samples and a 95% CI.

## Results

### Preliminary Analyses

Means and standard deviations for the variables in the model are presented in Table 1. We examined data for extreme cases and for normality and identified and trimmed two outliers. All variables were within the normal range for skew and kurtosis. Missing data for each measure was minimal, with 3% of items missing for the BASC-3 Depression Scale and 1% of items missing for the PSSM Scale. Correlations among variables in the model ranged from -.59 to .86. Although the correlations between the baseline variable covariates and the corresponding follow-up variables were  $> .80$ , the variance inflation factor (VIF) for all variables in the model ranged from 1.2 – 5.0 with corresponding tolerance levels ranging from .20 - .88, suggesting low levels of multicollinearity. We found no significant differences between students in the intervention and control groups with respect to gender,  $\chi^2(1) = 0.77, p = .38$ , ethnicity,  $\chi^2(3) = 0.79, p = .85$ , age,  $t(40) = 1.03, p = .31$ , sense of school belonging,  $t(40) = 0.82, p = .42$ , self-esteem,  $t(40) = -0.18, p = .86$ , or depression,  $t(40) = -0.37, p = .71$ .

### Testing Direct Effect of the Intervention

We first hypothesized that the intervention would be associated with lower levels of depressive symptoms (i.e., the total effect). Figure 2 presents the results of the total effect model tested in the path analysis. Evaluation of the global fit statistics indicated that the direct model testing the total effect of the STAC intervention on depressive symptoms was a good fit for the data. The overall chi-square test of the model was statistically nonsignificant,  $\chi^2(1) = 0.14, p = .71$ , the CFI was 0.99, and the RMSEA was 0.00. The results showed that the STAC intervention was directly related to a decrease in depressive symptoms,  $\beta = .23, p = .01$ .

### **Testing the Indirect Effects of the STAC Intervention**

We hypothesized that the STAC intervention would result in increased sense of school belonging which would result in lower depressive symptoms. Figure 3 presents the results of the mediational model tested in the path analysis. Evaluation of the global fit statistics indicated that the tested model was a good fit for the data. The overall chi-square test of the model was statistically nonsignificant,  $\chi^2(2) = 0.72, p = .71$ , the CFI was 1.00, and the RMSEA was 0.00. Examination of the path coefficients revealed that the intervention significantly increased sense of school belonging,  $\beta = .18, p = .05$ , sense of school belonging was significantly related to depressive symptoms,  $\beta = -.49, p = .001$ , and the intervention significantly reduced depressive symptoms through the mediated effect of increasing sense of school belonging,  $\beta = .09, p = .02$ , 95% CI [-.23, -.01]. The direct path from the intervention to depressive symptoms was not significant ( $\beta = -.14, p = .09$ ). These results offer evidence that sense of school belonging mediated the relationship between the intervention and depressive symptoms.

### **Discussion**

The purpose of this study was to evaluate the efficacy of a brief, bystander intervention on decreasing depressive symptoms and to examine the role of sense of school belonging as a

mediator of intervention effects. Because bullying remains a problem in high school (U.S. Department of Education, 2016) and witnessing bullying is associated with depressive symptoms (Hutchinson, 2012; Janson et al., 2009; Rivers & Noret, 2010; Rivers & Noret, 2013; Rivers et al., 2009), there is a need for effective programs that can be implemented with this age group (Denny et al., 2015). In particular, bystander programs that train students to “defend” targets of bullying may be particularly effective for high school students (Polanin et al., 2012). Overall, results of this study provided support for the efficacy of the STAC program in decreasing depressive symptoms through the process of increasing student sense of school belonging.

Results of the path analysis testing the total effect of the STAC intervention on depressive symptoms supported our hypothesis that students in the STAC intervention group would report a decrease in depressive symptoms compared to students in the control group. Although researchers have reported that brief bystander interventions can improve positive socio-emotional outcomes among bystanders in elementary (Midgett et al., 2017a) and middle (Midgett et al., 2017c) school, to our knowledge, this is the first study testing intervention effects among high school students. Thus, this study adds to the literature by demonstrating the efficacy of a brief, bystander intervention in reducing depressive symptoms among high school students. This is particularly important as witnessing bullying in high school is associated with depressive symptoms (Hutchinson, 2012; Janson et al., 2009; Rivers et al., 2009), including suicidal ideation (Rivers & Noret, 2010; Rivers & Noret, 2013).

Results of the path analysis testing the mediation model also supported our hypothesis that sense of school belonging would mediate the relationship between the STAC intervention and depressive symptoms. To our knowledge, this is the first study to examine sense of school belonging as a mediator of the relationship between a bystander intervention and depressive

symptoms among high school students. Our findings suggest that training students to act as “defenders” may lead to students feeling more connected to their school through advocating for targets of bullying, which in turn leads to a decrease in depressive symptoms. These findings are consistent with research indicating that students who act as defenders report decreased loneliness and increased feelings of social support (Olenik-Shemesh et al., 2015), as well as research demonstrating an inverse association between sense of school connectedness and depression among adolescents (Langille et al., 2012; Lester et al., 2012; Millings et al., 2012; Shochet et al., 2011).

### **Limitations and Directions for Future Research**

While this study extends the literature investigating a brief, counselor-led, bullying bystander intervention specifically designed for high school students, certain limitations should be considered. First, generalizability of the results is limited due to the single high school in the study. Second, although we utilized a stratified random sampling procedure, we were unable to obtain a sample that matched the school’s demographics. Our sample included a greater proportion of Latino/a, Asian, and African-American students and a lower proportion of White students than the school’s student population. Additionally, females and 11<sup>th</sup> grade students were overrepresented in our sample while males and 10<sup>th</sup> and 12<sup>th</sup> grade students were underrepresented. It is possible that the discrepancy between the sample and school demographics is the low response rate (21%) which is lower than the 30%-60% range typical of other school based intervention studies using active parental consent (Smith et al., 2009). As a result, our findings must be interpreted with caution as they may not be generalizable to the school’s population or to other high schools. Further, response bias should also be considered as active parental consent procedures can result in samples that are less diverse and at lower-risk

(Shaw, Cross, Thomas, & Zubrick, 2014; Smith et al., 2009) than passive consent procedures. Future research with larger samples is needed to replicate findings and increase generalizability of the results. Finally, although the current study provides support for the impact of the STAC intervention on sense of school belonging and depressive symptoms among bystanders, the duration of the follow-up was short (i.e., 30 days). In future studies, researchers should use longer follow-up periods to determine if positive outcomes are sustained over time.

### **Implications for Counselors**

This study has several practical implications for counselors. First, findings support the efficacy of the STAC program on increasing protective factors and decreasing negative consequences associated with witnessing bullying as a bystander. Because approximately 70.6% of students report witnessing bullying as a bystander (Bradshaw et al., 2007), and being a bystander is associated with depressive symptoms (Hutchinson, 2012; Janson et al., 2009; Rivers et al., 2009) including suicidal ideation (Rivers & Noret, 2010; Rivers & Noret, 2013), providing programming that teaches bystanders to act as “defenders” is an important objective for high school counselors. Because of the multiple demands on both school counselors and high school students’ time, a brief program such as STAC that can be delivered in 90-minutes may be an effective way to increase sense of school belonging through equipping students with strategies they can use to interrupt bullying incidences.

Counselors working with adolescents outside of the school setting can provide clients with psychoeducation based on the content of the STAC training. Because the majority of youth observe bullying at school (Bradshaw et al., 2007), it is likely that many adolescent clients may be impacted by bullying. Counselors can assess their clients’ experiences with witnessing bullying, particularly among clients who are reporting depressive symptoms. Counselors can

talk with these clients about the different types of bullying they observe and teach clients the four STAC strategies to empower them to intervene on behalf of students who are targets of bullying. Counselors can follow-up with clients regarding the types of bullying they observed and their experience utilizing the strategies. Counselors can also help clients' problem solve ways to become effective "defenders" and provide support for clients to intervene in bullying situations.

### **Conclusion**

This study tested the efficacy of the STAC intervention on decreasing depressive symptoms and sense of school belonging as a mediator of intervention effects. Findings supported the mediational model indicating participating in the STAC intervention increased sense of school belonging, which in turn reduced depressive symptoms. Results of this study have important implications for high school counselors and professional counselors outside of the school setting who work with adolescents.

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Table 1

*Means and Standard Deviations for Primary Variables by Group*

	Group	
	Intervention ( <i>n</i> = 22)	Control ( <i>n</i> = 20)
Outcomes	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Sense of School Belonging		
Baseline	67.09 (9.53)	64.00 (15.02)
30-Day Follow-Up	71.14 (9.83)	63.90 (15.71)
Depression		
Baseline	8.32 (5.20)	9.32 (7.87)
30-Day Follow-Up	5.80 (4.34)	8.61 (6.71)

**Figure Captions**

Figure 1

*Total Effect Model*

Figure 2

*Mediational Model*



