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2016

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The version of record can be found at <https://doi.org/10.1002/ab.21688>



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Bullying Participant Roles and Gender as Predictors of Bystander Intervention

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Abstract

Although the importance of peer bystanders in bullying has been recognized, there are few studies that examine the phenomenon in relation to Latané and Darley's (1970) classic Bystander Intervention Model, which states that there are five stages of bystander intervention: (1) notice the event; (2) interpret the event as an emergency that requires assistance; (3) accept responsibility for intervening; (4) know how to intervene or provide help; and (5) implement intervention decisions. This study examined preliminary evidence of reliability and validity of the Bystander Intervention Model in Bullying (Nickerson, Aloe, Livingston, & Feeley, 2014), and the extent to which bullying role behavior (bullying, assisting, victimization, defending, and outsider behavior) and gender predicted each step of the model with a sample of 299 middle school students. Results of a Confirmatory Factor Analysis supported a five-factor structure of the measure corresponding to the steps of the model. There was evidence of convergent validity and Cronbach alpha for each subscale exceeded 0.75. In addition, students who reported defending their peers were more likely to also engage in all five steps of the bystander intervention model, while victims were more likely to notice events, and outsiders were less likely to intervene. Gender differences and gender interactions were also found.

Keywords: bystander intervention; defending; bullying; middle school; bystander effect

Bullying Participant Roles and Gender as Predictors of Bystander Intervention

Bullying is a serious and pervasive problem in schools (Dinkes, Kemp, Baum, & Snyder, 2009). The social-ecological model of bullying highlights individual, school, classroom, family, and peer variables that promote or inhibit bullying (Swearer & Espelage, 2011). At the peer level, only 20-30% of students participate in bullying as a bully or victim, but 70-80% of students serve some other participant role (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996). Bystanders and their powerful role in inhibiting or exacerbating bullying have been a growing focus of empirical study (Salmivalli, 2010). Despite the advances, there is a dearth of research examining the specific process of bystander intervention from a strong theoretical framework. The purpose of this study was to examine the extent to which middle school students' participant roles predict engagement in each step of the bystander intervention based on Latané and Darley's (1970) classic framework. In addition, the role of gender in these relations was examined.

Participant Roles in Bullying

Bullying is conceptualized as a social event that is implicitly and explicitly supported by peers (Jones, Bombieri, Livingstone, & Manstead, 2012; Salmivalli & Voeten, 2004). Salmivalli et al. (1996) identified four roles other than bully and victim that peers can play in bullying incidents: (a) reinforcer of the bully (e.g., laughs, encourages); (b) assistant to the bully (e.g., joins in); (c) defender of the victim (e.g., tells teacher, comforts victim); and (d) outsider (e.g., unaware of or ignores bullying). Although researchers sometimes categorize youth into these discrete groups, it may be more appropriate to examine the degree to which the behavior that youth engage is consistent with these roles. Treating an individual as a "defender or "outsider" may not accurately reflect their behavior at all times because youth can display behavior that is

consistent with one or more participant roles (e.g., bully and defender, victim and defender, or bully and victim; Huitsing & Veenstra, 2012; Veenstra et al., 2005).

Mobilizing bystanders to intervene directly or indirectly to stop bullying is important in bullying prevention (Polanin, Espelage, & Pigott, 2012). Youth who defend can take many actions to reduce bullying, such as making active efforts to stop bullying, reporting incidents, asking a teacher or another adult for help, or supporting, consoling, or taking the side of the student(s) being victimized (Espelage, Green, & Polanin, 2012; Huitsing & Veenstra, 2012). These actions reduce bullying perpetration and victimization (Craig, Pepler, & Atlas, 2000; O'Connell, Pepler, & Craig, 1999; Salmivalli, Voeten, & Poskiparta, 2011) and contribute to students' feelings of safety (Gini, Pozzoli, Borghi, & Franzoni, 2008).

Most research focuses on correlates for individuals who defend. Empathy is related to defending behavior in bullying (Barchia & Bussey, 2011; Caravita, Di Blasio, & Salmivalli, 2009; Nickerson, Mele, & Princiotta, 2008). Some researchers have found that defenders have above average social and moral development, high levels of social self-efficacy, cooperation, and assertion, and tend to be well liked by their peers (Gini, Albiero, Benelli, & Altoè, 2008; Gini, Hauser, & Pozzoli, 2011; Jenkins, Demaray, Fredrick, & Summers, 2014; Monks, Ortega-Ruiz, & Torrado-Val, 2002; Tani, Greenman, Schneider, & Fregoso, 2003). Interestingly, anti-bullying attitudes and opinions about how to deal with bullying do not distinguish between active and passive bystanders in some studies (Camodeca & Goossens, 2005; Salmivalli & Voeten, 2004).

Bystander Intervention in Bullying

Despite the growing body of research on participant roles in bullying, there is scarce research on a theoretically-grounded process of bystander intervention (Meter & Card, 2015). Bystander behavior in emergency situations has been the focus of social psychological research

for over four decades and is centered on understanding why people do not help when they witness another person in distress. A powerful finding has centered on the bystander effect, or the inhibiting effects of the presence of others on helping behavior (Darley & Latané, 1968; Dovidio, Piliavin, Schroeder, & Penner, 2006). Building on the empirical research in this area, Latané and Darley's (1970) bystander intervention model outlines five sequential steps one must take in order to take action.

The first step is to notice the event, as perceptions of an event's occurrence directly or indirectly predict intervention (Greitemeyer, Fischer, Kastenmüller, & Frey, 2006). Vivid events with specific, identifiable victims are more likely to draw bystanders' attention (Dovidio et al., 2006; Loewenstein & Small, 2007). Pressing priorities, noise, and other distractions decrease the likelihood a person will notice an event requiring help (Burn, 2009; Dovidio et al., 2006). After noticing an event, the situation must be interpreted as an emergency requiring assistance. In this step, bystanders often look to others to guide their interpretation (Latané & Darley, 1968), although dangerous situations are associated with a lesser bystander effect (Fischer et al., 2011). Once the event has been interpreted as an emergency requiring help, the next step is to accept personal responsibility for intervening, although when bystanders are present, one may assume someone else will intervene or taking action will be diffused throughout the group (Darley & Latané, 1968). Next, an individual must know what actions to take in order to intervene effectively in a situation requiring help. The final step in the bystander intervention model is to intervene in the situation, which can be impacted by perceived costs to the individual (e.g., time, danger; Batson, 1995; Piliavin, Piliavin, & Rodin, 1975), as well as self-efficacy in relation to the intended goal (Anker & Feeley, 2011; Banyard, 2008). This theoretical model encompasses many of the processes related to defending, but it should be noted that other factors, such as

individual goals, relationships with the people involved in the bullying, and expectations also contribute to the likelihood of defending (Meter & Card, 2015)

Recently, Nickerson et al. (2014) created a survey to assess the extent to which high school students engage in steps of the bystander intervention model in bullying and sexual harassment. Applying the bystander intervention model to bullying may help researchers and educators understand in which defending behavior students engage, to allow them to equip students with skills to engage in all steps of the model. For example, if students do not interpret bullying as a social emergency requiring intervention (Step 2), schools may need to educate them about the negative effects of bullying to increase awareness of the distress bullying may cause. Or, if students do not know how to intervene (Step 4), schools can provide training on different ways students can help (e.g., confront the bully, report to an adult, comfort the victim).

Gender Differences

Boys and girls differ in many important ways related to bullying and bystander intervention. Boys are more likely than girls to be victims and perpetrators of bullying, particularly physical bullying (Cook, Williams, Guerra, Kim, & Sadek, 2010). Girls are more likely than boys to assume the role of defender (Ma, 2002; Monks et al., 2002; Nickerson et al., 2008; Olweus, 1993; Rigby & Johnson, 2006; Salmivalli et al., 1996), although this has not been found in all studies (see e.g., Nickerson & Mele-Taylor, 2014). As bystanders, girls have been found to demonstrate higher moral sensitivity (i.e., recognizing harm of bullying, sympathizing with victims) and lower moral disengagement during bullying incidents than boys (Thornberg & Jungert, 2013). Defending is more likely to occur among same-gender peers (Saino, Veenstra, Huitsing, & Salmivalli, 2010), and it may be more expected or gender-typical for girls to defend (Rigby & Johnson, 2006). A meta-analysis found that the bystander effect was less likely to

occur in more dangerous situations where men are present, suggesting that people are more likely to intervene when they believe bystanders with higher physical strength may be available to help (Fischer et al., 2011). Girls also tend to cope with bullying by seeking social support, problem solving, and internalizing the problem, whereas boys are more likely to distance themselves from the victim's negative experiences (Hunter & Borg, 2006; Hunter, Boyle, & Warden, 2004; Pozzoli & Gini, 2010). Given the importance of gender in understanding the dynamic of bullying and bystander intervention, it is critical to further explore gender differences.

Current Study

The aims of this study were to confirm the factor structure of the *Bystander Intervention in Bullying* measure with a middle school sample and examine the extent to which gender and participant role behavior in bullying (bullying, assisting, victimization, defending, outsider behavior) predict each step of bystander intervention. Middle school is a critical time period to study because this is when bullying peaks (Nansel et al., 2001; Unnever & Cornell, 2004). In addition, helpful bystander behavior (i.e., defending) decreases in sixth through eighth grades (Endresen & Olweus, 2001; Suchy, Tomasino, & Jenkins, 2015).

The fundamental research questions addressed in this study were: (a) Is there evidence that the *Bystander Intervention in Bullying* survey developed by Nickerson et al. (2014) is appropriate to use with middle school students? To answer this, the factor structure and internal consistency of the *Bystander Intervention in Bullying* survey were assessed with the current middle school sample. (b) Is there evidence of convergent validity for the *Bystander Intervention in Bullying* survey when examining the associations with defending behavior, as measured by the *Bullying Participant Behavior Questionnaire* (BPBQ; Summers & Demaray, 2008)? (c) To what

extent does each bullying role behavior predict the likelihood that individuals engage in the five bystander intervention steps: notice the event, interpret it as an emergency, accept responsibility, know how to act, and intervene? Does this relation differ for boys and girls?

Method

Participants

Participants included 299 American students in sixth (34.4%), seventh (33.8%), and eighth grade (31.8%), ranging from 12 to 14 years of age. The sample had 171 girls (57.2%) and 128 boys (42.8%). The school was 91.1% White, 1.2% African American, 3% Hispanic American, and 4.7% multi-racial. Forty-seven percent (47.8%) of the students were considered low income and received free or reduced meals at school. The demographic characteristics of the participants in the study were representative of the rural community in which the school is housed. The 2010 Census indicated the community was 85% White and 20% of the residents were considered to live in poverty.

Measures

Bullying Participant Behavior Questionnaire (BPBQ; Summers & Demaray, 2008). The BPBQ is a 50-item scale that measures five bullying participant roles: Bully, Assistant, Victim, Defender, and Outsider. Each subscale has 10 items rated on a 5-point Likert scale (0=*Never*, 1=*1 to 2 times*, 2=*3 to 4 times*, 3=*5 to 6 times*, 4=*7 or more times*). Students were provided with a definition of bullying and asked to rate each question based on what they have experienced in the past 30 days. The Bully subscale assesses frequency of participation in bullying perpetration behavior. The Assistant subscale assesses frequency of joining in or encouraging the bullying. The Victim subscale assesses frequency of receipt of aggressive behavior from peers. The

Defender subscale assesses frequency of standing up for victims, reporting bullying, and befriending victims. The Outsider subscale assesses frequency of ignoring bullying.

Evidence of reliability and validity was published by Demaray, Summers, Jenkins, and Becker (2014) in a sample of 801 middle school students. The sample was bifurcated for analyses. A principal component analysis (PCA) using an oblique (Promax) rotation with five forced factors accounted for 60% of the variance. The KMO measure of 0.88 indicated a high sampling adequacy. Bartlett's test of sphericity was significant ($p < .001$). A CFA was conducted using the other half of the split data set and confirmed a five-factor structure with appropriate fit statistics ($\chi^2(1145) = 2668.89$, $p < .001$, CFI = 0.88, SRMR = 0.06, RMSEA = 0.065, 90% CI [0.062, 0.068], PNFI = 0.74). Alpha coefficients ranged from 0.88 to 0.94. Evidence of validity was provided by predictable subscale correlations (e.g., Bully and Assistant subscales, $r = 0.60$, $p < .01$; Bully and Victim, $r = 0.32$, $p < .01$; Assistant and Victim, $r = 0.19$, $p < .01$; Victim and Defender, $r = 0.41$, $p < .01$; Outsider and Victim, $r = 0.25$, $p < .01$; Outsider and Defender, $r = 0.21$, $p < .01$).

Bystander Intervention in Bullying (Nickerson et al., 2014). This 16-item scale measures five subscales of the bystander intervention model: Notice, Interpret, Accept Responsibility, Know how to Act, Intervene. The measure was originally developed for high school students and focused on bystander behavior in bullying and sexual harassment situations (Nickerson et al., 2014). For the current study, several changes were made to the measure. First, items were worded to only focus on bullying, not sexual harassment (e.g., "I think bullying and sexual harassment are hurtful and damaging to others" changed to "I think bullying is hurtful and damaging to others") given the focus on middle school students. Second, a reverse-coded item ("If someone makes sexually inappropriate comments, the student on the receiving end should

realize it is just a joke”) was revised so it no longer needed to be reverse-coded (“I think it is wrong to make inappropriate comments towards others, even if it is just a joke”) due to the relatively low factor loading of that item in the Nickerson et al. (2014) study. Example items include: I have seen other students being bullied at my school this year (Notice), It is evident to me that someone who is being bullied needs help (Interpret), If I am not the one bullying others, it is still my responsibility to try and stop it (Accept Responsibility), I know what to say to get someone to stop bullying someone else (Know how to Act), and I would say something to a student who is acting mean or disrespectful to a more vulnerable student (Intervene).

Nickerson et al. (2014) reported that a confirmatory factor analysis supported a five-factor structure corresponding to the five steps of the *Bystander Intervention in Bullying* survey (RMSEA = 0.05, 90% CI [0.04, 0.06], CFI = 0.96, GFI = 0.95, NFI = 0.94). In that sample, 15 out of 16 factor loadings were greater than 0.60 except for the one item that was reverse coded. Internal consistency coefficients for the subscales were all above 0.75 (except the Emergency subscale with the reverse-coded item). The five factors were positively correlated, with correlations ranging from 0.21 (between Notice and Know) to 0.80 (between Responsibility and Act). Further information regarding the factor structure and internal consistency and convergent validity of the measure in the current sample is provided below.

Procedure

Data were collected at a rural middle school as part of a social and emotional evaluation for the entire school. Consistent with school procedures, parents/guardians signed consent for social, emotional, behavioral, and academic screening at the beginning of the school year at registration. In addition, one week prior to the evaluation, parents/guardians were notified of the data collection and one parent denied their child’s participation; thus, all students in the school

participated except for one. Students completed surveys using a web-based survey program, Qualtrics, using laptop computers during their Physical Education period in large groups of 30-40 students. Students were given an identification number for the purpose of the study and no identifying information was provided by the student.

Results

Table 1 provides means, standard deviations, and intercorrelations by gender for the variables in the study. Results for main research questions are below.

Confirmatory Factor Analysis and Internal Consistency

In order to explore the appropriateness of the *Bystander Intervention in Bullying* measure for this middle school sample and to ensure measurement equivalence for boys and girls, a Confirmatory Factor Analyses (CFA) was conducted using AMOS 24.0 maximum likelihood estimation to provide robust estimates of the parameters. To explore measurement invariance across gender, a multi-group CFA was used. Differences in path coefficients for boys and girls were examined using critical ratios, which is uses a z test to compare differences in the coefficients. Absolute values exceeding 1.96 indicate a significant difference in path coefficients between boys and girls. Model fit was evaluated based on five measures of fit: χ^2 , relative χ^2 (CMIN/df), the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Parsimonious Normed Fit Index (PNFI), based on recommendations by Hooper, Coughlan, and Mullen (2008). When evaluating fit, a nonsignificant χ^2 value is wanted (Barrett, 2007); however, χ^2 is sensitive to sample size (Hu & Bentler, 1995); therefore, it is important to consider other fit indices. Relative χ^2 ratios between 3 and 1 (Carmines & McIver, 1981), CFI values greater than .90 (Browne & Cudeck, 1989), RMSEA values between .05 and .08 (Browne & Cudeck, 1989), and PNFI values greater than 0.50 are indications of acceptable model fit.

Model fit indices for the *Bystander Intervention in Bullying* model indicated that the expected five-factor structure was appropriate: $\chi^2 = 173.56$, $p < .001$, relative $\chi^2 = 1.846$, CFI = 0.969, RMSEA = 0.053, (CI 0.41, 0.066), and Parsimonious Normed Fit Index (PNFI; 0.647). All path coefficients were significant and in the positive direction for girls and boys (See Table 2). The critical ratio test indicated there were no significant differences between boys and girls on path coefficients, indicating measurement equivalence for boys and girls. For the combined sample (boys and girls), alpha coefficients were 0.87, 0.77, 0.82, 0.85, and 0.84 for the Notice, Interpret, Accept, Know, and Intervene subscales, respectively.

Convergent Validity

In order to examine convergent validity of the *Bystander Intervention in Bullying* measure, correlations between the Defending subscale of the BPBQ and each step of the *Bystander Intervention in Bullying* model were examined. Defending was positively correlated ($p < .001$) with each step of the *Bystander Intervention in Bullying* model for the total sample: Notice ($r = 0.35$), Interpret ($r = 0.26$), Responsibility ($r = 0.34$), Know ($r = 0.30$), and Intervene ($r = 0.29$). Positive correlations between defending and the bystander intervention steps provided evidence of convergent validity for the *Bystander Intervention in Bullying model*, but correlations were low enough to indicate that these scales measured distinct constructs.

Regression Analyses

In order to determine the extent to which bullying role behavior and gender predicted the five types of bystander behavior, regression analyses were conducted with each bullying role behavior (Bullying, Assisting, Victimization, Defending, Outsider behavior), gender, and role by gender interactions as predictors, and each step of the bystander intervention model as dependent variables (see Table 3). Prior to creating the interaction terms, variables were centered (i.e., the

mean of each variable was subtracted from the total score for each participant). All five bullying roles were entered as independent variables in order to statistically account for overlap in behavior. Gender was a dummy-coded predictor with Boys coded as 1 and Girls coded as 2.

The regression for Notice the Event was significant, $F(11, 290) = 7.42, p < .001$. The five BPBQ participant role behavior and gender accounted for a significant amount of variance (Adjusted $R^2 = .191, p < .001$). Victimization and Defending were significantly positively related to Notice the Event. Gender was significant, which indicates when holding other variables constant, girls have significantly higher Notice scores than boys. There were no significant gender interactions.

The regression for Interpret the Event as an Emergency was significant, $F(11, 290) = 6.90, p < .001$, with the five BPBQ participant role behavior and gender accounting for a significant amount of variance (Adjusted $R^2 = 0.183, p < .001$). Defending was significantly positively related to Interpret. Gender was significant; when holding other variables constant, girls had significantly higher Interpret scores than boys. There was a significant gender interaction for Victimization. For girls, less victimization was associated with greater likelihood to interpret events as an emergency than girls who experienced higher levels of victimization. The opposite trend was observed for boys.

The regression for Responsibility was significant, $F(11, 289) = 6.36, p < .001$, Adjusted $R^2 = 0.169, p < .001$. Defending was significantly and positively related to Responsibility.

The regression for Know how to Act was also significant, $F(11, 289) = 4.70, p < .001$, Adjusted $R^2 = 0.124, p < .001$. Defending was significantly positively related to Know how to Act. There was a significant gender interaction for Outsider behavior. For girls, less outsider behavior was associated with greater knowledge of how to intervene compared to girls with more outsider

behavior. For boys, an opposite trend was observed. The regression for Intervene was significant, $F(11, 286) = 7.44, p < .001$, Adjusted $R^2 = 0.199, p < .001$. Victimization and Defending were significantly positively related to Intervene.

Discussion

The current study provides support for the bystander intervention model of bullying for an early adolescent sample. The *Bystander Intervention in Bullying* survey was used with middle school students, with some changes made to make it more appropriate for use with early adolescents. For example, the original survey developed and examined by Nickerson et al. (2014) focused on both bullying and sexual harassment, but none of the questions in the current study asked about sexual harassment. Minor wording changes were also made. Confirmatory factor analysis supported the five factor structure of the measure in our sample of middle school students for both boys and girls. In addition, positive correlations between each step of the Bystander Intervention Model and the Defending subscale of the BPBQ provide support for convergent validity. Although additional research is needed to further examine evidence of reliability and validity of the *Bystander Intervention in Bullying*, the current study provides some support for the psychometric properties of the measure for middle school students.

Associations between bullying role behavior (bullying, assisting, victimization, defending, and outsider behavior) and bystander behavior were also examined. Boys and girls who reported higher levels of victimization and defending behavior were also more likely to notice bullying events. Victimized bystanders experience higher anxiety than nonvictimized bystanders (Carney et al., 2010; Nishina & Juvonen, 2005), which could contribute to a greater likelihood of scanning the environment for potential threats of bullying to oneself or others.

Similarly, individuals who defend others may be more aware of bullying or seek out opportunities to help.

Students who defended others were more likely to interpret bullying situations as an emergency. In order for someone to stand up for their peers, they would need to judge a bullying situation as a “social” emergency or a distressing situation that needed to be addressed. In addition, girls were more likely to interpret events as emergencies than boys. Past research has found that girls are more likely to experience emotional maladjustment or internalizing problems when faced with bullying as a victim and/or bystander, whereas boys tend to distance themselves (Hunter & Borg, 2006; Hunter, Boyle, & Warden, 2004; Pozzoli & Gini, 2010; Werth, Nickerson, Aloe, & Swearer, 2015). There was a significant interaction between victimization and gender, which indicated girls who reported less victimization were more likely to interpret events as an emergency than girls who reported high levels of past victimization; however, for boys, higher victimization was associated with greater likelihood of interpreting bullying as an emergency. It is likely that the social context of bullying, including interdependence between the peers involved in bullying as victims, perpetrators, and bystanders, and informational conditions of the situation, may contribute to this (Meter & Card, 2015). It is not uncommon for bullies and victims to belong to the same social network, especially for girls (Crick & Werner, 1998). In addition, Nickerson and Mele-Taylor (2014) found that girls who had friends with more prosocial affiliations and friends with more pro-bullying attitudes were more likely to be bullies, victims, and outsiders than defenders. If a girl is bullied and witnesses bullying within her social network, she may be less likely to interpret this as an emergency. Boys, in contrast, may need to experience the victimization themselves to see bullying as an emergency situation. It is possible that having experience with victimization may counteract some of the disengagement from the

situation that is sometimes found in boys (Thornberg & Jungert, 2013). It is also possible that the different forms of bullying experienced and witnessed relate to these differences; for example, relational and verbal bullying may not be viewed as serious as physical forms. Future research should further explore the impact of past victimization experiences on bystander behavior within the context of previous and ongoing relationships within the social network.

Students who reported higher levels of defending also reported a greater sense of responsibility to intervene. Like the other bystander behavior discussed above, it is intuitive that youth who defend feel a greater responsibility to intervene. Similarly, students who defended also reported greater knowledge of how to intervene. Defending was the only bullying role behavior significantly related to knowledge, which may suggest that students who engage in other bullying role behavior do not know how to appropriately intervene during bullying situations. These findings are also consistent with research showing high levels of social self-efficacy, or believing one can actually perform the behavior, related to students being more likely to defend victims of bullying (Gini et al., 2008).

There was a significant interaction for outsiders and gender where less outsider behavior was associated with greater knowledge of how to intervene for girls, but lower knowledge of how to intervene for boys. Although it is expected that more outsider behavior would be associated with less knowledge of how to intervene (as seen for girls), it was surprising why boys with higher outsider behavior also reported higher knowledge of how to intervene. One possibility is that although middle school boys know what to do to intervene in bullying situations, there are contextual factors that inhibit their interventions, thus making them act as outsiders. Boys with aggressive behavior become more accepted as they enter adolescence, and are even perceived as “cool” (Rodkin & Hodges, 2003). Bullying is also used to establish or

improve social standing (Bibou-Nakou, Tsiantis, Assimopoulos, Chatzilambou, & Giannakopolou, 2012), so although boys may know what to do to intervene, they may be more likely to stay outside of the situation to maintain or improve social standing. This is consistent with goal framing theory and interdependence theory, where individuals interpret situations in ways that help them achieve their goals and work to maximize positive outcomes and minimize negative outcomes (Meter & Card, 2015). Additional research should focus on how knowledge to intervene translates into actual actions, incorporating important variables such as relationships with the people in the bullying situation. Finally, greater defending was associated with greater likelihood to intervene, but greater outsider behavior was associated with less likelihood to intervene, a pattern expected based on characteristics of defenders and outsiders.

Limitations

There are some notable limitations of the current study that should be addressed in future research. First, although participants were from diverse socioeconomic backgrounds, they were nearly all White. Therefore, future studies should include other ethnic groups. All data collected were self-reported by participants within a cross-sectional design, so any questions regarding longitudinal relationships between bullying role behavior and bystander intervention could not be explored. There are important longitudinal research questions related to this line of research that would be beneficial for future studies to answer. For example, does victimization that occurs in elementary school impact bystander behavior differently than if victimization does not start until middle school? Future research should address these limitations as well as answer important questions within a longitudinal design.

Implications for Practice

Results of the current study are applicable not only to researchers studying bystander behavior, but also to practitioners. Though there are prevention programs based on existing bullying research, the *Bystander Intervention in Bullying* survey is a promising new tool that may make schools' bullying prevention and intervention plans more effective by focusing specifically on the role of bystanders. For example, school psychologists can give the *Bystander Intervention in Bullying* survey to an entire student population. Schools can examine which proactive bystander behavior students currently engage in and then focus on equipping students with the skills to engage in appropriate bystander behavior. Depending on the results, students may need explicit instruction of some or all of the steps.

When applying the results of the current study to research on bullying prevention and intervention programs, there are several applicable findings that researchers and schools can utilize in designing prevention programs. Middle school girls reported that they interpreted bullying events as an emergency more than boys. There were also significant gender interactions that showed that boys and girls have different associations between bullying role behavior and bystander behavior. For example, girls who experienced less victimization were more likely to interpret events as emergencies than girls with higher levels of victimization, but the inverse association was found for boys. Also, girls that reported more outsider behavior also reported lower knowledge of how to intervene in bullying situations, but again the inverse relationship was found for boys. These gender differences can be presented to students and explored in relation to what supports are needed for bystander intervention to be effective in different bullying contexts.

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Table 1
Means, Standard Deviations, and Bivariate Correlations of Main Study Variables by Gender

	1	2	3	4	5	6	7	8	9	10	Girls <i>M</i> (<i>SD</i>)	Boys <i>M</i> (<i>SD</i>)
1. Bully	-	.72**	.43**	.05	.55**	.13	-.26**	-.12	-.03	-.30**	13.86 (4.41)	13.73 (4.58)
2. Assistant	.59**	-	.35**	.03	.42**	.13	-.18*	-.16*	-.09	-.31**	11.23 (2.39)	11.83 (3.81)
3. Victim	.44**	.14	-	.55**	.21**	.34**	-.09	.02	.03	-.08	20.60 (10.65)	17.48 (9.03)
4. Defender	.10	.02	.44**	-	.08	.32**	.18*	.27**	.25**	.23**	22.43 (10.08)	18.64 (8.71)
5. Outsider	.48**	.54**	.18*	.19*	-	.13	-.17*	-.16*	-.11	-.28**	13.10 (4.41)	13.45 (5.77)
6. Notice	.19*	.09	.50**	.36**	.05	-	.44**	.44**	.40**	.33**	10.38 (3.31)	9.55 (3.38)
7. Interpret	-.21*	-.35**	.18*	.32**	-.12	.24**	-	.64**	.59**	.61**	13.15 (2.37)	12.23 (2.60)
8. Accept	-.21*	-.24**	.06	.41**	-.12	.20*	.64**	-	.71**	.67**	11.41 (2.75)	10.78 (2.99)
9. Knowledge	-.11	-.24**	.04	.36**	.01	.18*	.44**	.65**	-	.70**	11.38 (2.78)	11.05 (2.99)
10. Intervene	-.26**	-.28**	.02	.34**	-.14	.18*	.56**	.59**	.63**	-	15.68 (3.59)	14.84 (3.44)

Note. Correlations above diagonal are for girls and below diagonal are for boys; * $p < .05$, ** $p < .01$. Means and standard deviations are for the uncentered variables. Possible range of scores is 0-40 for Bully, Assistant, Victim, Defender, and Outsider, 3-15 for Notice, Interpret, Accept, Knowledge, and 4-20 for Intervene.

Table 2
Factor Loadings for Bystander Intervention in Bullying Measure

	Girls			Boys			z
	b	SE	β	b	SE	β	
Item 1	.914	.070	.811	.958	.118	.742	.321
Item 2	.927	.063	.892	1.182	.138	.927	1.67
Item 3	1.00		.884	1.00		.739	
Item 4	.910	.106	.666	1.009	.158	.654	.522
Item 5	1.142	.105	.843	1.192	.171	.724	.252
Item 6	1.00		.792	1.00		.715	
Item 7	.921	.097	.722	.858	.101	.717	-.451
Item 8	.980	.093	.794	.998	.097	.839	.136
Item 9	1.00		.788	1.00		.812	
Item 10	.998	.087	.838	.994	.086	.833	-.031
Item 11	.990	.099	.745	1.004	.101	.753	.101
Item 12	1.00		.796	1.00		.879	
Item 13	1.037	.111	.710	.911	.138	.596	-.715
Item 14	1.133	.101	.836	.993	.111	.780	-.932
Item 15	1.051	.097	.805	.964	.109	.768	-.599
Item 16	1.00		.776	1.00		.787	

Table 3
Regression Results for Bullying Roles on BPRQ, Gender, and Interactions on Five Steps of Bystander Intervention in Bullying

		B	SE	β	<i>p</i>	β Lower	β Upper
Notice	Bullying	-.030	.087	-.040	.725	-.201	.140
	Assisting	.046	.142	.042	.748	-.234	.325
	Victimization*	.068	.030	.205	.023	.009	.128
	Defending*	.065	.029	.188	.025	.008	.121
	Outsider	.047	.065	.070	.471	-.081	.174
	Gender	-.146	.387	-.021	.707	-.907	.615
	Bullying X Gender	.015	.121	.013	.904	-.224	.253
	Assisting X Gender	.073	.171	.055	.669	-.264	.410
	Victim X Gender	.092	.049	.160	.059	-.004	.189
	Defending X Gender	.021	.046	.037	.640	-.069	.112
Interpret	Outsider X Gender	-.132	.087	-.149	.133	-.303	.040
	Bullying	-.098	.065	-.175	.133	-.227	.030
	Assisting	.011	.107	.014	.917	-.200	.222
	Victimization	-.035	.023	-.140	.127	-.079	.010
	Defending**	.067	.022	.260	.002	.024	.110
	Outsider	-.038	.049	-.077	.430	-.134	.057
	Gender*	-.573	.291	-.113	.050	-1.145	.000
	Bullying X Gender	.015	.091	.018	.866	-.164	.195
	Assisting X Gender	-.235	.129	-.235	.069	-.489	.019
	Victim X Gender	.084	.036	.200	.021	.013	.156
Responsibility	Defending X Gender	.007	.035	.017	.831	-.061	.075
	Outsider X Gender	.064	.066	.096	.333	-.066	.193
	Bullying	.069	.076	.107	.364	-.080	.218
	Assisting	-.181	.124	-.195	.146	-.426	.064
	Victimization	-.032	.026	-.114	.218	-.084	.019
	Defending***	.094	.025	.320	.001	.045	.144
	Outsider	-.107	.056	-.188	.057	-.218	.003
	Gender	-.013	.336	-.002	.970	-.674	.649
	Bullying X Gender	-.144	.106	-.151	.174	-.352	.064
	Assisting X Gender	.068	.149	.059	.652	-.227	.362
Know	Victim X Gender	.013	.042	.028	.748	-.069	.096
	Defending X Gender	.065	.040	.131	.105	-.014	.143
	Outsider X Gender	.075	.076	.099	.325	-.074	.224
	Bullying	.118	.079	.184	.134	-.037	.273
	Assisting	-.150	.128	-.162	.242	-.402	.102
	Victimization	-.040	.027	-.142	.135	-.093	.013
	Defending***	.093	.026	.316	.000	.043	.144

	Outsider	-.110	.058	-.192	.061	-.225	.005
	Gender	.217	.347	.037	.531	-.465	.899
	Bullying X Gender	-.095	.109	-.100	.383	-.310	.119
	Assisting X Gender	-.093	.154	-.082	.544	-.396	.209
	Victim X Gender	-.003	.043	-.007	.939	-.088	.081
	Defending X Gender	.042	.041	.085	.308	-.039	.122
	Outsider X Gender*	.168	.078	.222	.033	.013	.322
Act	Bullying	-.027	.093	-.034	.771	-.211	.156
	Assisting	-.273	.156	-.231	.081	-.581	.034
	Victimization	-.050	.032	-.142	.120	-.112	.013
	Defending***	.119	.030	.326	.000	.059	.179
	Outsider*	-.157	.068	-.219	.022	-.292	-.023
	Gender	-.206	.414	-.029	.619	-1.021	.609
	Bullying X Gender	-.107	.130	-.088	.413	-.363	.150
	Assisting X Gender	.131	.187	.089	.484	-.237	.499
	Victim X Gender	.030	.051	.050	.563	-.071	.131
	Defending X Gender	.038	.049	.062	.432	-.057	.134
	Outsider X Gender	.135	.094	.139	.151	-.050	.319

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.