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Reaching Out versus Lashing Out: Examining Gender Differences in Experiences with and Responses to Bullying in High School

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Abstract The present study examines gender differences in bullying in high school. Unique contributions include comparisons of both victimization and perpetration rates across four subtypes of bullying: physical, verbal, relational, and cyber. Further, as we conceptualize bullying within the larger framework of literature on social rejection, we also address whether there are gender differences in experiencing social rejection–in the form of bullying–and responding with aggression, as opposed to asocial or prosocial behavior. The literature yields mixed findings across these three questions (i.e., gender differences in experiences with victimization and perpetration and responses to those experiences), suggesting sample variations (Archer *Review of General Psychology, 8*(4), 291–322, 2004; Archer & Coyne *Personality and Social Psychology Review, 9*, 212–230, 2005; Card, Stucky, Sawalani, & Little *Child Development, 79*, 1185–1229, 2008). Thus, we explored experiential differences in our sample, and hypothesized based on the *tend and befriend* model (Taylor et al., 2000) that girls would be more likely than boys to respond to bullying with prosocial behaviors. With regard to victimization and perpetration differences, we found that male students both experienced and perpetrated significantly more physical bullying. Boys were also significantly more likely to report experiencing verbal bullying than girls. No significant differences emerged for relational or cyber bullying. With regard to responses, social withdrawal was more common than aggressive responding, but consistent with the *tend and befriend* model, girls chose prosocial responses significantly more than boys, whereas boys were just as likely to choose anti-social responding as prosocial responding. These results suggest that gender should be

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considered in studies addressing the question of when experiences with rejection–in its many forms–results in antisocial versus prosocial behavior.

Reflecting both empirical and societal interest, the past decade has yielded a surge in research on bullying. A search of an online scholarly database, Scopus, reported approximately 185 publications on *bullying* in 2005, which largely originated in the US and UK, whereas 2015 records noted over 1200 publications across 55 different countries. The 1990s yielded alarming headlines and the introduction of the term "school shooting" into cultural parlance (Borum, Cornell, Modzeleski, & Jimerson, 2010; Burns & Crawford, 1999; Muschert, 2009). As research revealed histories of chronic or acute rejection within the experiences of these shooters (Hutchinson, Wilkes, Vickers, & Jackson, 2008; Leary, Kowalski, Smith, & Phillips, 2003; Vossekuil, Reddy, Fein, Borum, & Modzeleski, 2000), interest piqued and has not abated. Researchers (Kalish & Kimmel, 2010; Kimmel & Mahler, 2003; Klein, 2005) have also identified the social construction of gender (e.g., masculinity and aggrieved entitlement) to be present in the majority of school shooting cases, with boys being more likely to be perpetrators of school violence than girls. Gender is a primary frame for organizing social relations (Ridgeway, 2009); therefore, a better understanding of gender differences in perpetration, victimization, and responses to rejection (i.e., types of bullying) in schools is warranted.

The purpose of the present research is to add to this burgeoning literature; advocating for an integration of literature on social rejection and bullying, while arguing for the importance of examining gender as a moderator across the bullying spectrum (e.g., physical, verbal, relational, and cyber; PVRC). Specifically, we explore gender differences in perpetration and victimization across all four bullying subtypes (i.e., PVRC), while also moving beyond the question of whether differences exist regarding experiences with bullying by examining responses to those experiences. The responses that we examine include addressing a persistent question within rejection literature: namely, when does rejection–in this case in the form of bullying–lead to antisocial responding, as opposed to prosocial behavior or asocial withdrawal (Hutchinson et al., 2008; Richman & Leary, 2009)? We integrate the *tend and befriend* model (Taylor et al., 2000; Taylor, 2006) to argue for why gender might be an important moderator regarding responses to bullying experiences.

Defining and Conceptualizing Bullying

Diverse definitions of bullying exist. Although there is a large body of literature that defines bullying as repeated aggressive acts with the intention to cause harm that are characterized by power differentials among bullies and victims (see Boulton, Bucci, & Hawker, 1999; Olweus, 1991; Solberg & Olweus, 2003), another body of research has noted how this definition leads to conceptual issues in reporting and recognizing bullying when it occurs (Donoghue & Raia-Hawrylak, 2016; Harris, 2009; Klages & Wirth, 2014). This latter body of research argues that it is sometimes difficult to detect power differentials and intention, and argues that aggression in schools should be

examined more inclusively in order to research the types of aggressive behavior. Within the present research, we conceptualize bullying as a form of aggressive social rejection that consists of purposeful harassment that attempts to devalue the target (Harris, 2009; Klages & Wirth, 2014).

Expanding beyond the traditional focus on physical bullying, researchers today have included four subtypes of aggression (PVRC) in operationalizing bullying (Archer, 2004; Card et al., 2008; Grotpeter & Crick, 1996; Wang, Iannotti, & Nansel, 2009). Physical aggression includes harming another individual physically, such as by hitting, kicking, or shoving (Olweus, 1991). Verbal aggression involves the intent to harm another by calling names or threatening harm (Björkqvist, Österman, & Kaukiainen, 1992; Wang et al., 2009). Relational aggression is the intent to harm another's relationships or social status by targeting the victim indirectly, such as by spreading rumors or encouraging social exclusion (Crick & Grotpeter, 1995; Grotpeter & Crick, 1996). Cyber aggression is the intent to harm through electronic means, such as through social media, text message, or digital media (Hinduja & Patchin, 2008; Marcum, Higgins, Freiburger, & Ricketts, 2012; Wang et al., 2009).

Bullying victimization is common among middle and high school girls and boys (Scheithauer, Hayer, Petermann, & Jugert, 2006). Empirical data supports that 25% of middle and high school students experience aggression and bullying (Zimmer-Gembeck et al., 2013). The school crime safety supplement to the US National Crime Victimization survey of 2013 shows that 22% of students between ages 12–18 were bullied at least once during the school year, and 7% reported being cyber bullied (Robers, Kemp, Rathbun, & Morgan, 2014). Based on extant research, 12.8–27.8% of high school students report experiencing physical aggression, 36.5–62.1% report experiencing verbal aggression, 23.8–43.4% report experiencing relational aggression, and 7–11% report experiencing cyber aggression (Kowalski & Limber, 2007; Robers et al., 2014; Wang et al., 2009). These subtypes of bullying can also be classified as direct (e.g., physical, verbal) and indirect (e.g., relational, cyber) forms of aggression (Card et al., 2008).

The distinction in sub-types of bullying has allowed for a greater understanding of less traditional forms of bullying, such as relational aggression (e.g., spreading rumors) and cyber aggression (i.e., the use of electronic means to harm another person), which are more difficult to detect because they tend to be more indirect or covert forms of aggression. Traditional bullying such as verbal aggression (e.g., calling others mean names and using verbal threats) and physical bullying (e.g., hitting, kicking, or shoving someone), on the other hand, can been classified as overt/direct aggression and is usually easier to identify. The classification of indirect and direct forms of aggression is supported by several factor analyses (Björkqvist et al., 1992; Crick & Grotpeter, 1995; Grotpeter & Crick, 1996; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Macgowan, Nash, & Fraser, 2002; Vaillancourt, Brendgen, Boivin, & Tremblay, 2003) and meta-analyses (Archer, 2004; Card et al., 2008).

Gender Differences in Bullying Perpetration

Recognizing the subtypes of bullying has resulted in researchers concluding that indirect aggression is more common among girls, while direct aggression is more common among boys (Crick, 1997; Crick & Grotpeter, 1995; Grotpeter & Crick, 1996). However, since the 1990s, research has revealed discrepancies regarding gender differences in bullying

perpetration (Archer & Coyne, 2005; Card et al., 2008). Some studies reveal that boys engage in more indirect aggression (i.e., relational aggression) than girls (Orpinas, McNicholas, & Nahapetyan, 2015; Tomada & Schneider, 1997; Underwood, 2002), whereas others show no gender differences for indirect aggression (Archer & Coyne, 2005; Loflin & Barry, 2016; Salmivalli & Kaukiainen, 2004). Researchers (Wang et al., 2009) also found boys are more involved in physical, verbal, and cyber aggression and girls are more active in relational aggression. Research findings on cyberbullying are inconsistent due to variations in definitions and measurement, and thus the existence of gender differences remains a question (Lapidot-Lefler & Dolev-Cohen, 2015; Li, 2006; Marcum et al., 2012; Sincek, 2014; Wang et al., 2009). Further, results from a meta-analysis suggest that when it comes to indirect aggression, boys and girls may be more similar than different (Card et al., 2008). Few studies have attempted to resolve why the discrepant findings exist (Orpinas et al., 2015; Salmivalli & Kaukiainen, 2004; Wang et al., 2009), but the existence of the discrepancies suggests that researchers examining bullying should test for gender differences within their samples. Sample variations–age, locale, socioeconomic status–may help explain differences between studies. Accordingly, in the present study, we aim to explore possible gender differences within our dataset.

Gender Differences in Bullying Victimization

Similarly, a variety of research had demonstrated that boys are more likely to be victims of physical and verbal aggression, whereas girls are more likely to be victims of relational aggression (Donoghue & Raia-Hawrylak, 2016; Scheithauer et al., 2006; Wang et al., 2009). When it comes to cyber aggression, however, studies have found mixed results (Marcum, Ricketts, & Higgins, 2010; Marcum et al., 2012; Sincek, 2014) with one study finding no gender differences in cyber aggression victimization (Donoghue & Raia-Hawrylak, 2016). However, other studies suggest that in general, boys are more frequently bullied than girls (Olweus, 1991; Robers et al., 2014; Scheithauer et al., 2006) which highlights the importance of expanding the definition of bullying to move beyond physical or verbal aggression. Differences in research findings regarding victimization may result from a number of factors similar to those affecting reports of perpetration, including age (e.g., younger versus older children), geographic region, culture, and the operationalization of bullying, to name a few. Therefore, as with perpetration, it is important to include gender when examining victimization across the different subtypes of bullying.

Bullying, Rejection, and Responses

Bullying is a targeted form of aggression that is not without consequences (Crick, 1996; Crick & Grotpeter, 1995; Rudolph, Troop-Gordon, & Flynn, 2009). In fact, though boys frequently report victimization more than girls, neither boys nor girls are immune to being victims of social rejection via aggression and bullying (Scheithauer et al., 2006). Bullying contributes to an array of harmful outcomes including physical, psychological, and social damage (Sigurdson, Wallander, & Sund, 2014). For example, studies have documented adverse effects on adolescents' depression levels, cardiovascular reactivity, school achievement, likelihood of suicide, and relationships (Boulton, Trueman, & Murray, 2008; Farrington & Ttofi, 2011; Hawker & Boulton, 2000;

Newman, 2014; Smokowski, Evans, & Cotter, 2014). Additionally, there is evidence of changes at the neurological level (e.g., activity, stress hormone levels) due to peer victimization that parallels findings on the neuroscience of social pain of rejection (MacDonald & Jensen-Campbell, 2011; Vaillancourt, Clinton, McDougall, Schmidt, & Hymel, 2010).

Just as bullying has an array of outcomes, so too does it elicit an array of responses. Certainly, antisocial responses–such as retaliating against aggressors, lashing out at others, or hurting oneself–have received the bulk of the attention (Reijntjes et al., 2010; Williams & Zadro, 2001). However, there is an array of behaviors (i.e., prosocial, asocial, antisocial) from which an individual can choose to respond to rejection (Richman & Leary, 2009). Rejection causes almost immediate feelings of negative affect (i.e., anger, sadness, and distress) and lowered self-esteem, which result in three sets of motives that can occur simultaneously: (1) the need for social acceptance, (2) the need to avoid further rejection, and (3) the need to defend oneself (Blackhart, Baumeister, & Twenge, 2006; Iffland, Sansen, Catani, & Neuner, 2014; Richman & Leary, 2009). Prosocial responses consist of attempts to promote acceptance, such as mending the harmed relationship; this type of response is more likely to occur when individuals perceive that their relationships are repairable (Richman & Leary, 2009). Asocial responses include fleeing from rejection, such as avoiding the aggressor, peers, and related social events in attempt to prevent further harm (Richman & Leary, 2009). Finally, antisocial responses consist of retaliatory and aggressive behaviors that are often characterized by a lack of self-control and negative emotions (Richman & Leary, 2009). Thus, the behaviors that individuals choose as responses depend on the motives triggered by the rejection experiences; motives can be determined by individual (e.g., gender) and situational factors (e.g., type of rejection experience) (Leary, Koch, & Hechenbleikner, 2001; Leary & Leder, 2009; Richman & Leary, 2009). For instance, individuals have been found to respond differently towards indirect and direct forms of bullying (Smith, Barkley, & Shapiro, 2009; McMahon & Frick, 2009). A meta-analysis (Card et al., 2008) revealed that responses to direct aggression (e.g., physical or verbal bullying) include more externalizing problems (e.g., poor peer relations, higher levels of antisocial behaviors) while responses to indirect aggression (e.g., relational bullying) include more internalizing problems (e.g., depression, low self-esteem), as well as higher levels of prosocial behaviors. Further identifying factors that could be instrumental in determining when bullying and rejections leads to antisocial responding over prosocial responding has been noted as integral to the future of research on the rejection-aggression link (Blackhart et al., 2006; Richman & Leary, 2009).

Although there are a number of behavioral responses from which individuals can choose to respond to bullying, repeated rejection that alienates youth has been linked to school violence and school shootings (Twenge, Baumeister, Tice, & Stucke, 2001; Vossekuil et al., 2000). Social rejection is evident in the majority of cases of shootings and school violence (Leary et al., 2003), with one-third of school shooters specifically reporting that they felt bullied by others (Vossekuil et al., 2000). Among elementary and middle-school students, increases in rejection over time have led to increases in aggression over time (Kupersmidt, Burchinal, & Patterson, 1995). Among older youth, individuals who have been alienated have also been found to angrily lash out towards their perpetrators (Reijntjes et al., 2010; Williams, 1997; Williams & Zadro, 2001).

Gender Differences in Responses to Victimization

It is quite clear that rejection in the form of bullying can lead to aggression (Reijntjes et al., 2010; Williams & Zadro, 2001). Further, research suggests that antisocial reactions to rejection are a more common response among boys than girls (Hutchinson et al., 2008; Kalish & Kimmel, 2010; Kimmel & Mahler, 2003; Klein, 2005; Leary et al., 2003; Reijntjes et al., 2010; Reijntjes et al., 2011; Richman & Leary, 2009; Williams, 1997; Williams & Zadro, 2001). For example, Sommer, Leuschner, and Scheithauer (2014) examined 126 cases of school violence and found that 121 (96%) of cases included *male* perpetrators, with 29.9% being physically bullied and 53.7% experiencing peer rejection, including verbal and other types of aggression. Research findings also suggest that boys are more likely than girls to seek revenge against their aggressors (Card et al., 2008; Hodges & Perry, 1999; Rose & Asher, 1999; Rose & Rudolph, 2006; Slaby & Guerra, 1988). Multiple explanations have been offered for this finding, including aggrieved entitlement, responding to perceived threats of a loss of privilege, or loss of face that challenges conceptions of masculinity (Brown, Osterman, & Barnes, 2009; Kalish & Kimmel, 2010; Kimmel & Mahler, 2003; Klein, 2005). However, this gender difference may exist not just because, as research has argued, that boys may be *more* aggressive than girls generally, but also that girls may be *less* aggressive (Rose & Rudolph, 2006; Taylor, 2006; Taylor et al., 2000).

Researchers (Taylor, 2006; Taylor et al., 2000) have found evidence for a *tend and befriend* response to stress in women, but they did not find this response in men. The *tend and befriend* response involves seeking out a social group for mutual defense or befriending one's aggressor in response to a threat or attack. Instead, men are more likely to use a *fight or flight* response (i.e., the physiological response to fight back or withdraw from a threat or attack) to stressors, such as rejection (Lee & Harley, 2012). The *tend and befriend* model asserts that women are more likely than men to respond prosocially to stressors, including being attacked or rejected, such as by trying to repair their relationships with their aggressors (Taylor, 2006; Taylor et al., 2000).

The *tend and befriend* model provides a theoretical framework for understanding stress responses in women over the fight or flight response that more closely resembles the responses that men evince (Lee & Harley, 2012). Originally, the *tend and befriend* model was based on evolutionary theory, arguing that women's biological differences (e.g., hormonal, genetic) associated with reproduction and the survival of offspring have influenced their stress responses (Taylor, 2006; Taylor et al., 2000). For instance, sex dimorphisms on the oxytocin receptor (OXTR) gene have been differentially linked to prosocial and harm avoidant behavior in women (McQuaid, McInnis, Matheson, & Anisman, 2015; Stankova, Eichhammer, Langguth, & Sand, 2012) but antisocial behavior in men (Waller et al., 2016). Experimental studies have also found that women are more bio-behaviorally sensitive to social rejection than men as evidenced by higher increases in cortisol levels (Stroud, Salovey, & Epel, 2002; Weik, Maroof, Zöller, & Deinzer, 2010) and higher skin conductance when ostracized (Iffland et al., 2014). Further, while both male and female participants exposed to ostracism reported more negative affect than those not ostracized, significant differences in hostility toward the rejecters was only evident in male participants (Zwolinski, 2012).

However, recent work provides evidence that socialization is not to be overlooked as men's prosocial behavior appears more linked to OXTR polymorphisms than women's

(Feng et al., 2015), particularly in collectivistic cultures (Nishina, Takagishi, Inoue-Murayama, Takahashi, & Yamagashi, 2015). Generally, women are reared to be more empathic (Laurent & Hodges, 2009) and it is this empathy that has been shown to have a stronger effect than gender in predicting a propensity for befriending an individual rejecter (Barford, Pope, Harlow, & Hudson, 2014). Both perspectives argue that women–either via biology or socialization or both–are more likely to exhibit affiliative behaviors in response to stress such as caring for others, finding new relationships, peacemaking, joining social groups to reduce vulnerability to threats or imminent harm, and the desire to affiliate by mobilizing social support (Turton & Campbell, 2005).

Thus, when applied to our study, we believe that girls will be more likely to respond prosocially by engaging in behaviors represented through this model, including affiliation with others or the aggressor, in order to reduce their likelihood of exclusion from social groups. To date, only one study has examined gender differences in victimization and perpetration across the four sub-types of bullying (Wang et al., 2009), and no studies have assessed gender differences in *responses* to the four sub-types of bullying victimization. We address this gap.

The diversity of findings regarding gender differences in the prevalence of bullying in high school seems to necessitate gender analyses in bullying studies (Archer, 2004; Archer & Coyne, 2005; Card et al., 2008). However, the goal of the present research is to also examine whether there is reason to anticipate that gender may play a role in addressing when experiences with bullying yield antisocial responses. Research has identified boys as being more likely to externalize stress responses (e.g., fighting back) while also choosing flight responses to aggression (e.g., to avoid further victimization), whereas girls are more likely to respond via a *tend and befriend response,* for example, by tending to the situation to repair the relationship or seeking out alternative others for friendship (Lee & Harley, 2012; Taylor, 2006; Taylor et al., 2000).

Despite there being much evidence for *tend and befriend* (Iffland et al., 2014; Lee & Harley, 2012; McQuaid et al., 2015; Stankova et al., 2012; Stroud et al., 2002; Taylor, 2006; Taylor et al., 2000; Weik et al., 2010), no studies have examined *tend and befriend* across the spectrum of all possible responses to bullying. Little is actually known regarding how boys and girls may respond differently to subtypes of bullying, particularly with regard to who might lash out versus reach out. As such, our unique contribution to the rejection literature includes empirically testing the application of *tend and befriend* to explain possible gender differences in responses to overt and covert forms of bullying.

The Current Study

The purpose of the present study is to better understand gender differences in bullying victimization and perpetration, as well as behavioral responses (e.g., prosocial, asocial, antisocial behaviors) across the four subtypes (PVRC) of bullying. Our study makes a number of unique contributions to the literature. First, given that most studies have focused on gender differences in perpetration only, this study adds to the literature by also examining gender differences in victimization. Second, to our knowledge, only one study (Wang et al., 2009), conducted among a sample of sixth–tenth grade students, has examined gender differences across the four subtypes of bullying victimization and perpetration, as most victimization studies have focused on gender differences in relational bullying. Third, this study is one of the first to examine gender differences in how

individuals respond to experiences with PVRC bullying. In the present research, we propose the following research questions: (1) Are there gender differences in PVRC bullying perpetration?; (2) Are there gender differences in PVRC bullying victimization?; and (3) Are there gender differences in how students respond (e.g., prosocial, asocial, antisocial responses) to PVRC bullying victimization?

Given that the literature shows that boys experience and engage in more direct forms of aggression than girls (Orpinas et al., 2015; Salmivalli & Kaukiainen, 2004; Wang et al., 2009), we expect to find support for the following hypotheses: (H1) Boys will be more likely to perpetrate physical and verbal aggression than girls; and (H2) Boys will be more likely to experience physical and verbal bullying victimization than girls. As the research is mixed as to whether girls or boys are more likely to experience and engage in cyber aggression (Donoghue & Raia-Hawrylak, 2016; Marcum et al., 2010; Marcum et al., 2012; Sincek, 2014), we do not propose any hypotheses for this subtype. Similarly, because findings in the literature are mixed with regard to the perpetration of relational aggression (Archer, 2004; Archer & Coyne, 2005; Card et al., 2008), we do not propose hypotheses for this factor. However, research does suggest that girls are more likely to be victims of relational aggression (Crick & Grotpeter, 1995; Grotpeter & Crick, 1996). Thus we propose our third hypothesis: (H3) Girls will be more likely than boys to experience relational victimization (Donoghue & Raia-Hawrylak, 2016; Scheithauer et al., 2006; Wang et al., 2009). Regarding responses to bullying victimization, because boys are more likely to *fight or flight* (Lee & Harley, 2012), and girls are more likely to *tend and befriend* in response to stress (i.e., rejection; Taylor, 2006; Taylor et al., 2000), we expect to find support for the following hypothesis: (H4) Boys will be more likely than girls to respond antisocially (fight) and asocially (flight). Research on *tend and befriend* suggests that girls may be more likely than boys to seek relationship repair (Taylor, 2006; Taylor et al., 2000). Thus, we expect to find support for the following hypothesis: (H5) Girls will engage in more prosocial responses than boys.

Method

Participants

Four hundred and forty-seven public high school students in a rural Southeastern U.S. school agreed to participate in an online survey regarding how often they experienced or engaged in PVRC bullying. After obtaining IRB approval from the university, and parental consent from parents, students received a choice of incentives (i.e., water bottle, USB drive, earbuds) for returning the consent form that was provided (regardless of participation status). A total of 1397 students were invited to participate in the study, and 556 returned consent forms signed by their parents (response rate = 40.1%). Table 1 includes the sample demographics on gender, race/ethnicity, age, student grade level, location of residence, and mother's level of education.

Materials

All of the materials were presented online using Qualtrics, and participants completed the measures in one sitting at the school. In addition to participants'

Table 1 Sample demographics

	Percent (N)
Gender	
Female	55.5 (248)
Male	44.1 (197)
Other	0.4 (2)
Race/Ethnicity	
Caucasian	32.4 (145)
African-American	63.8 (285)
Hispanic/Latino	4.3 (19)
Asian, Native Hawaiian, or Pacific Islander	2.0 (9)
Native American/Alaska Native	3.4 (15)
Other	4.3 (19)
Age (M = 15.95, SD = 1.27)	
14	11.6 (52)
15	30.6 (137)
16	24.6 (110)
17	17.9 (80)
18	14.3 (64)
19	0.9 (4)
Student Grade Level	
Freshman	31.8 (142)
Sophomore	28.2 (126)
Junior	19.0 (85)
Senior	21.0 (94)
Location of Residence	
Within city limits	80.8 (361)
Outside city limits	19.2 (86)
Mother's level of education	
Did not complete high school	4.0 (18)
High school degree/GED	18.1 (81)
Some college	13.2 (59)
Associate's degree	5.8 (26)
Bachelor's degree	14.8 (66)
Master's degree	15.7 (70)
Ph.D.	4.7 (21)
Not sure	23.7 (106)

demographics, the following information was collected: victimization and perpetration experiences, negative affect and self-esteem, and behavioral responses to rejection. To view the survey instrument, please see the Appendix. Other study materials can be found on the Open Science Framework at https://osf.io/.

Victimization and Perpetration Experiences

Items that assess victimization and perpetration experiences were listed at the beginning of the survey. Students were provided with a definition for each of the subtypes of bullying, and were then asked about their experiences. For each type of aggression, the participant was asked to reflect on the past six months at his/her school to answer: 1)

How often have you engaged in this behavior?; and 2) How often have you experienced (i.e., been the target of) this behavior? Participants responded on a six-point Likert scale (0 = never, 1 = once, 2 = rarely, 3 = sometimes, 4 = almost all of the time, and 5 = all of the time) and were asked a series of follow-up questions.

Assessing the ABC's of Responses to Bullying: Affective, Behavioral, and Cognitive

Negative Affect and Self-Esteem Items assessing negative affect and self-esteem were asked as follow-up questions when a participant reported experiencing PVRC aggression. Negative affect included 16 items (4 for each type of aggression) that measured sadness, anger, upset, and embarrassment (e.g., "How much did this experience make you feel sad?"; $\alpha = .91$). Self-esteem included 12 items (3 for each type of aggression) that were adapted from the Rosenberg (1965) Self-Esteem Scale (e.g., "How much did this experience make you question whether you had any good qualities?"; $\alpha = .93$). Both of the scales were responded to on a five-point Likert scale, with 0 = not at all and 4 = definitely.

Behavioral Responses to Rejection After completing the items about experiences with victimization, negative affect, and self-esteem, participants were asked how they have responded to the different types of aggression. Zimmer-Gembeck and Nesdale's (2013) Behavioral Responses to Rejection Scale was used to assess each subtype of behavior. There were 12 items to assess prosocial responses, 3 for each type of bullying. A sample item for prosocial responding includes the phrasing, "If someone became physically aggressive towards me, I have responded by: Going to someone (e.g., parent, teacher, friend) for help." Reliability for all 12 items was $\alpha = .90$. There were 16 items to assess antisocial responses, 4 for each sub-type of bullying. A sample item for antisocial responding includes: "If someone became verbally aggressive towards me, I have responded by: Doing to others what was done to me." Reliability was $\alpha = .90$. Lastly, there were 16 items to assess asocial responses, 4 for each type of bullying. A sample item for asocial responding includes: "If someone became socially aggressive towards me, I have responded by: Trying to avoid situations where I have to be with other people." Reliability was $\alpha = .83$. Item order was randomized. The scales were responded to on a 5-point Likert scale, with 0 = not at all and 4 = definitely. Demographics were collected at the end of the survey on the grade, gender, race, age, location of residence, and mother's level of education for each student.

Analysis Plan Descriptive statistics, chi-square analyses, and ANOVAs were conducted to test research questions regarding gender differences in perpetration and victimization. To test for differences within gender in PVRC bullying rates, repeated-measures ANOVAs with Bonferroni post-hoc comparisons were used with the four subtypes of aggression. Separate repeated-measures ANOVAs were conducted for the male and female samples, respectively. To examine gender differences in response to bullying victimization, we computed means that averaged the items to assess negative affect, which were asked as follow-up questions when a participant reported experiencing PVRC bullying. There were 16 items in total (4 following each type of aggression, asking about sadness, anger, upset, and embarrassment; $\alpha = .91$). We repeated the same process for the three self-esteem items that were

adapted from the Rosenberg (1965) Self-Esteem Scale, yielding 12 items total (α = .93). Further, as an index of internalizing, both the self-esteem and negative affect items were also averaged (combining all 28 items; α = .95). Both scales were responded to on a five-point Likert scale with *0 = not at all* and *4 = definitely*. For behaviors, we employed an adaptation of Zimmer-Gembeck and Nesdale's (2013) Behavioral Responses to Rejection Scale, which includes items that assess prosocial (12 items; α = .90), antisocial (16 items; α = .90), and asocial responses (16 items; α = .83). All scales were responded to on a five-point Likert scale with *0 = not at all* and *4 = definitely.*

Results

Research Question 1: Gender Differences in Perpetration

Are there gender differences in PVRC bullying perpetration? Extant research suggests that boys tend to be higher on aggressive behavior (e.g., physical, verbal) than girls, with one potential exception being relational aggression, whereby levels tend to even out with age (Orpinas et al., 2015). However, among girls, perpetrating relational aggression may be more common than perpetrating other types of aggression (Salmivalli & Kaukiainen, 2004). Accordingly, to address Research Question 1, we examined gender differences in perpetration by first computing means for responses to the four victimization questions: "How often [in the last 6 months] have you engaged in this behavior [PVRC aggression]?" Every question was preceded by a definition, and followed with a six-point Likert scale where *0 = never* and *5 = all of the time*. Descriptives are available in Table 2. As can be seen in Table 2, perpetration rates hovered around the rate of one incident. As such, to examine gender differences in perpetration rates, we collapsed the perpetration response scale into a categorical variable (0 = No, 1 = Yes). As both the predictor variable (gender) and the outcome variable (perpetration) were categorical variables, we employed chi-square analyses with using Cramer's V to approximate effect size (as recommended by Agresti, 1996). As can be seen in Table 3, types of PVRC bullying perpetration are distinct, with some subtypes having only weak positive associations. Results from the chi square analysis are provided in Table 4.

Table 2 Means and standard deviations for reported perpetration in high school within the past 6 months by gender and bullying type

Bullying Type	Physical	Verbal	Relational	Cyber
Male Students	0.92 (1.14)	1.35 (1.40)	0.94 (1.23)	0.56 (1.20)
Female Students	0.56 (1.04)	1.03 (1.26)	0.94 (1.26)	0.46 (1.06)

Table 3 Correlations between bullying perpetration types

	Physical	Verbal	Relational	Cyber
Physical	--			
Verbal	.39**	--		
Relational	.28**	.41**	--	
Cyber	.35**	.24**	.26**	--

**p < .005

Partially supporting Hypothesis 1, the only significant gender difference to emerge was with regard to male students using more physical aggression than female students, as seen in Fig. 1.

Lastly, to test for differences within gender, we employed two repeated-measures ANOVAs–one for boys and one for girls–with Bonferroni post-hoc comparisons of reports of physical, verbal, and relational aggression within gender using the original continuous scores on the six-point Likert scale. Cyber aggression was excluded from this analysis due to infrequency and skew. For girls, results showed that rates of verbal and relational aggression were significantly more common than physical aggression rates, $F(2238) = 17.65$, $p < .001$, $\eta^2 = .13$. For boys, using verbal aggression was more common than using physical or relational aggression, $F(2191) = 12.61$, $p < .001$, $\eta^2 = .12$.

Research Question 2: Gender Differences in Victimization

Are there gender differences in PVRC bullying victimization? Evidence suggests that rates of bullying in high school may be relatively equal–especially as students age–with potential gender differences in physical and verbal aggression (boys being higher than girls) and relational aggression (girls being higher than boys) (Card et al., 2008; Orpinas et al., 2015). To test Research Question 2, we first checked descriptives on responses to the four victimization questions: "How often [in the last 6 months] did someone from your school engage in [PVRC] aggression towards you?" Every question was preceded by a definition, and followed with a six-point Likert scale where $0 = never$ and $5 = all\ of\ the\ time$. As seen in Table 5, it was rare for frequencies to exceed 2 ("rarely"). Further, responses to the cyber aggression item were statistically skewed. As such, we again converted scores into a "yes" or "no" format. We then conducted chi-square analyses to examine gender differences in frequency using Cramer's V to approximate effect size (Agresti, 1996). In Table 6 we provide correlations for PVRC bullying victimization, finding subtypes to be distinct with some weak

Table 4 Results of chi-square analyses of gender differences in perpetration frequency

Physical aggression	Verbal aggression
$X^2 (1, N = 445) = 10.14$, $p = .001$, $V = .151$	$X^2 (1, N = 445) = 3.68$, $p = .055$, $V = .091$
Relational aggression	Cyber aggression
$X^2 (1, N = 445) = 0.01$, $p = .905$, $V = .006$	$X^2 (1, N = 445) = 0.239$, $p = .632$, $V = .023$
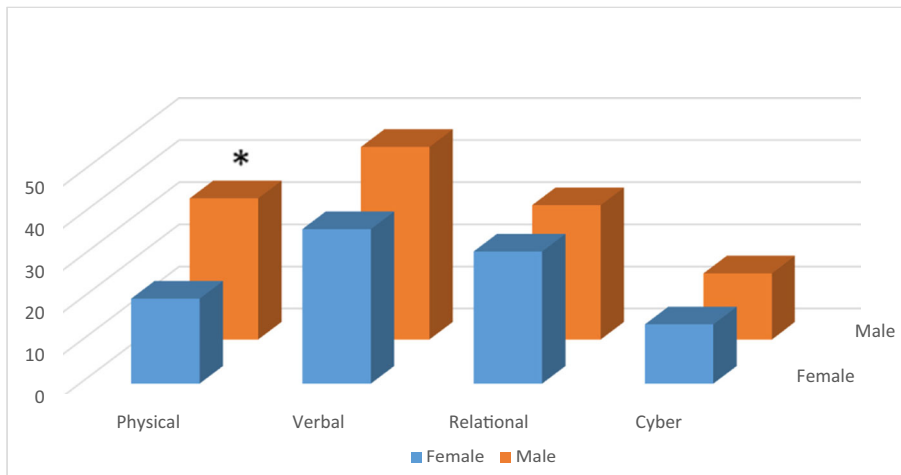
Denotes a significant gender difference was found.

Fig. 1 Percentage of students reporting bullying perpetration by gender and type of aggression

(positive) linear relationships to one another. Results from the chi square analysis are available in Table 7. Consistent with Hypothesis 2, significant gender differences with small effects emerged for experiencing physical and verbal aggression, with boys scoring higher than girls, as seen in Fig. 2. No other gender differences were evident.

Again, to test for differences within gender on whether boys or girls were more likely to experience one type of bullying over others, we employed two repeated-measures ANOVAs–one for boys and one for girls–with Bonferroni post-hoc comparisons. Using the original continuous scores on the six-point Likert scale, reports of physical, verbal, and relational victimization were compared within gender. However, cyber victimization was excluded again due to skew. Results for victimization paralleled those found for perpetration. For girls, results showed that rates of verbal and relational victimization were significantly higher than rates of physical aggression ($F(2246) = 12.05$, $p < .001$, $\eta^2 = .09$). For boys, experiencing verbal aggression was more common than experiencing physical or relational aggression ($F(2196) = 7.131$, $p = .001$, $\eta^2 = .04$).

Research Question 3: Gender Differences in Responses to Bullying

Are there gender differences in how students respond (e.g., prosocially, asocially, antisocially) to PVRC bullying victimization? As a form of stressful social rejection,

Table 5 Means and standard deviations for reported victimization in high school within the past 6 months by gender and bullying type

Bullying type	Physical	Verbal	Relational	Cyber
Male students	0.92 (1.16)	1.42 (1.45)	1.07 (1.29)	0.49 (0.97)
Female students	0.56 (0.97)	1.13 (1.33)	1.16 (1.41)	0.53 (1.07)

Table 6 Correlations between bullying victimization types

|	Physical	Verbal	Relational	Cyber
Physical	--			
Verbal	.47**	--		
Relational	.32**	.49**	--	
Cyber	.31**	.31**	.41**	--

**p < .005

bullying can elicit an array of responses across affective, cognitive, and behavioral spectrums (Richman & Leary, 2009). Individuals can internalize–feeling negative affect and thinking less of themselves–or they can externalize and act (Richman & Leary, 2009). However, the actions that individuals take do not necessarily have to be antisocial. Rather, literature examining the consequences of social rejection (e.g., acute rejection, ostracism, alienation) has shown that not all individuals respond to bullying antisocially (Hutchinson et al., 2008; Richman & Leary, 2009). Some individuals choose to be asocial and withdraw, whereas others seek to be more prosocial by reaching out for support or trying to build friendships (Taylor, 2006; Taylor et al., 2000). Based on extant literature, we expected that girls may be more likely to *tend and befriend*–i.e., pursue prosocial responses–rather than *fight or flight*–i.e., act out antisocially or withdraw, respectively (Taylor, 2006; Taylor et al., 2000). Boys may be more likely to exhibit the *fight or flight* response over prosocial behavior, especially in comparison to girls (Taylor et al., 2000; Taylor, 2006).

To answer Research Question 3, we ran a MANOVA testing for gender differences in negative affect and self-esteem (as these two outcome variables were correlated; $r = .72$). Although the analysis at the multivariate level suggested a potential difference (Wilks λ (2, 253) = 3.04, $p = .05$, $\eta^2 = .02$) there were no significant differences at the univariate level on either negative affect ($M = 1.43$, $SD = 1.11$ for girls; $M = 1.27$, $SD = 1.13$ for boys) or experiencing lowered self-esteem ($M = 0.98$, $SD = 1.16$ for girls; $M = 1.08$, $SD = 1.22$ for boys).

Subsequently, we ran a repeated-measures ANOVA looking for gender differences (between-subjects variable) by response type (prosocial, asocial, or antisocial; within-subjects variable). Here, significant differences emerged regarding the frequency of response type ($F(2, 254) = 12.95$, $p < .005$, $\eta^2 = .09$) as well as a significant interaction of gender and response type ($F(2, 254) = 4.20$, $p = .016$, $\eta^2 = .03$). Overall, according to Bonferroni post-hoc comparisons, antisocial responses were significantly less common than either asocial or prosocial responses. However, the interaction reveals that,

Table 7 Results of chi-square analyses of gender differences in victimization frequency

Physical aggression	Verbal aggression
X^2 (1, N = 445) = 7.41, p = .006, V = .129	X^2 (1, N = 445) = 4.60, p = .032, V = .102
Relational aggression	Cyber aggression
X^2 (1, N = 445) = 0.03, p = .869, V = .008	X^2 (1, N = 445) = 0.79, p = .373, V = .042
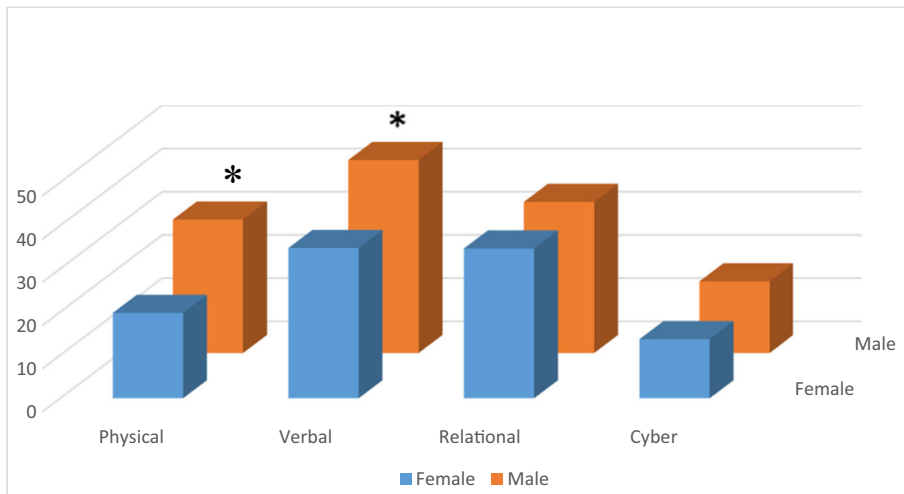
*Denotes a significant gender difference was found.

Fig. 2 Prevalence of bullying victimization by gender and type of aggression

consistent with the *tend and befriend* hypothesis, girls were significantly more likely to engage in prosocial responses than boys. In fact, for boys, there was no significant difference in their likelihood to choose antisocial over prosocial responses (see Fig. 3).

Finally, comparing whether there was a significant gender difference in negative internalizing (e.g., low self-esteem, negative affect) and negative externalizing (e.g., antisocial behavior), a repeated-measures ANOVA was again employed with internalizing versus externalizing as the within-subjects variable and gender as the between-subjects variable. No significant main effects or interactions emerged.
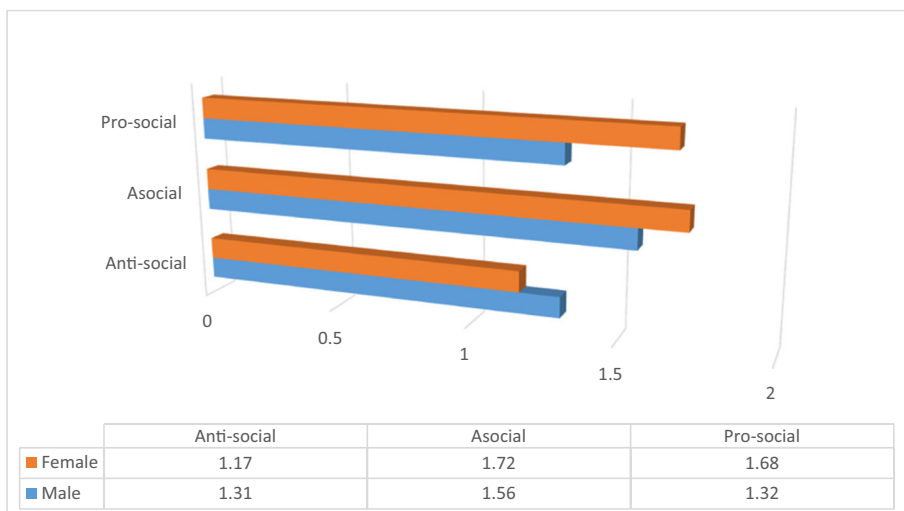

	Anti-social	Asocial	Pro-social
Female	1.17	1.72	1.68
Male	1.31	1.56	1.32

Fig. 3 Interaction of gender and response type

Discussion

The goal of this study was to examine gender differences across the four subtypes (PVRC) of bullying among high school students. Consistent with the literature (Orpinas et al., 2015; Salmivalli & Kaukiainen, 2004; Wang et al., 2009), our analysis suggests that there are gender differences in direct forms of aggression (i.e., physical and verbal bullying), with boys being more likely to be perpetrators and victims of physical aggression than girls, and being more likely to be victims of verbal aggression than girls. There were no statistically significant gender differences in indirect forms of aggression (i.e., relational aggression) in either victimization or perpetration reports. The latter two findings are somewhat inconsistent with the literature such that in some samples, girls have been found to perpetrate relational aggression more than boys (Björkqvist et al., 1992; Crick, 1997; Crick & Grotpeter, 1995; Grotpeter & Crick, 1996; Salmivalli, Kaukiainen, & Lagerspetz, 2000). However, as noted, the literature is mixed (Archer, 2004; Archer & Coyne, 2005; Card et al., 2008) and it may be that the diversity of operationalization is to blame. Thus, we can only say that, as measured in the present study, no gender differences were found for relational aggression perpetration or victimization.

While previous studies have found perpetration of verbal bullying to be higher among boys (Donoghue & Raia-Hawrylak, 2016; Robers et al., 2014), our study yielded only marginal evidence for a difference. However, we did find that boys are more likely to be victims of verbal bullying than girls. In our sample, verbal aggression was found to be the most prominent type of aggression overall, so the lack of gender differences in perpetration may be due to the normalization of verbal bullying in this school system. For girls, verbal and relational victimization was higher as compared to physical victimization, while for boys, verbal victimization was higher than physical or relational victimization. Some scholars (Anderson, 1999; Goldstein, Young, & Boyd, 2008; Hamburger, Basile, & Vivolo, 2011; Leff et al., 2010; Rodkin, Espelage, & Hanish, 2015) have argued that verbal or relational victimization likely occurs first, with physical victimization sometimes following as a response to initial verbal threats or harassment. Therefore, understanding how individuals respond to subtypes of bullying is key to improving safety in schools, as earlier intervention at verbal or relational "stages" may help stem later physical aggression. Again, though, it is important to note that girls may not proceed to the level of physical aggression as often as boys, and the sub-types of bullying may be damaging enough. Indeed, in follow-up exploratory analyses we found the means for how hurt girls felt when subjected to physical vs. verbal aggression was 1.60 for both types of bullying.

As for other behavioral responses, we examined whether there are gender differences in how high school students acted when bullied. Consistent with *tend and befriend*, we found that girls are more likely to respond to bullying with prosocial behaviors than are boys (Taylor, 2006; Taylor et al., 2000). In contrast, we found that boys are just as likely to choose prosocial responses as they are to choose antisocial responses. Social withdrawal was more evident in the sample than antisocial responses overall. Moreover, there were no gender differences in experiencing negative affect or lowered self-esteem post victimization. Accordingly, but for prosocial responding, boys and girls seem to respond to bullying in similar ways; feeling hurt, thinking less of themselves, and withdrawing. However, reaching out to others for social support is also a likely response among girls.

As previously stated, neither boys nor girls are immune to social rejection (Scheithauer et al., 2006). Thus, it may be that girls seek to reduce negative affect by tending to the self (i.e., social status or reputation at school) through befriending others more often than boys. Boys, on the other hand, may be more likely to choose more immediate responses of *fight or flight* while internalizing negative affect and it seems that flight (e.g., withdrawal, asocial responding) may be the first option over fight for boys. This withdrawal response was not uncommon among girls. It would be interesting if, in future research, we could discern the motive for withdrawal. If the *tend and befriend* premise is correct, a girl's motive for withdrawal might be to tend to the self, working on the self to restore self-esteem or reinvent the self to gain social acceptance (Anthony, Holmes, & Wood, 2007). Whereas for boys, the motive may be flight and simple harm avoidance, not withdrawal to improve the self to improve odds of future inclusion.

Contributions

As there have been mixed research findings regarding gender differences in bullying (Archer, 2004; Archer & Coyne, 2005; Card et al., 2008), this research contributes by examining victimization and perpetration rates for the different subtypes of bullying (PVRC) in a rural sample of high school students. This study is also among the first to examine gender differences in how students respond to the four subtypes (PVRC) of bullying with prosocial, asocial, and/or antisocial behaviors. Our results suggest that gender is important to consider when examining the effects of bullying because girls and boys have been shown to perpetrate, experience, and respond differently to aggression in certain instances.

Also of note is that in the present study we did not find much difference between high school students in their experiences with relational aggression. Consequently, although relational aggression was previously considered to be more of a female phenomenon, studies are showing that this may not be the case, with rises in relational aggression occurring among both boys and girls and an increasing number of studies showing no gender differences (Archer & Coyne, 2005; Card et al., 2008; Orpinas et al., 2015). Our study adds to this research, supporting that, at least among older youth, relational aggression is "equal opportunity." Further, it may be that individuals choose relational aggression with age because this form of aggression has fewer social costs (i.e., loss in reputation or social status) for perpetrators than more overt forms of aggression (e.g., physical aggression), which might entail school suspension or arrest, for example (Björkqvist, 1994).

As the current research elucidates, girls and boys may also have different responses to stress, such as experiences of rejection. As mentioned previously, the majority of aggression and violence in schools is related to social rejection, and perpetrators of school violence tend to be males with histories of peer rejection (Kalish & Kimmel, 2010; Kimmel & Mahler, 2003; Klein, 2005; Leary et al., 2003; Sommer et al., 2014). This mirrors our finding that boys are more likely to be perpetrators and victims of physical aggression and victims of verbal aggression. However, research has also suggested that while boys have been shown to respond more aggressively and engage in more bullying than girls, girls are more likely to *tend and befriend* (Lee & Harley, 2012; Taylor, 2006; Taylor et al., 2000).

As reviewed earlier, the *tend and befriend* model is supported by both biological gender differences (McQuaid et al., 2015; Stankova et al., 2012) and the use of different socialization techniques for girls and boys (Feng et al., 2015; Nishina et al., 2015). Thus, it is not surprising that women are more likely to respond to rejection prosocially than men (Zwolinski, 2012). The socialization of traditional gender norms that ascribe certain characteristics to masculine and feminine behaviors teaches boys and girls norms for how to act accordingly, based on their sex category membership (Hollander, 2013; Ridgeway, 2009; West & Zimmerman, 1987). For example, from a very early age, girls are taught to value social relationships and to have greater empathy than are boys (Rose & Rudolph, 2006; Barford et al., 2014; Laurent & Hodges, 2009). However, studies show that empathy can be taught (Graham & Ickes, 1997) and our findings revealed that boys were equally as likely to choose prosocial responding as asocial responding.

Important next steps to take in improving school safety, reducing aggression, and preventing antisocial responses might include increasing the accessibility of prosocial response options for boys. Interventions should focus on assisting all students with learning prosocial communication and behavioral skills that could be utilized in response to experiencing (PVRC) subtypes of bullying. For example, research on empathy has shown that it is a key ingredient to predict befriending attempts following negative social interactions (Barford et al., 2014). There is also research showing that the gender difference in empathy is something that can be "trained away" (Graham & Ickes, 1997). Thus, via enhancing empathic skills, interventions could reduce aggressive responding and increase prosocial action (e.g., Castillo, Salguero, Fernandez-Berrocal, & Balluerka, 2013; Stavrindes, Georgious, & Theofanous, 2010).

Further, as the bulk of responses tended to be asocial for both boys and girls, interventions should focus on assisting students who are differentially affected by (PVRC) subtypes of bullying. Indirect and covert forms of aggression (e.g., relational, cyber) are harder to detect and can extend beyond victimization at school. Additionally, indirect aggression can sometimes be more harmful because basic needs (e.g., social acceptance, to avoid further rejection, and the need to defend oneself) are immediately threatened and the effects are prolonged (Richman & Leary, 2009). For example, when the type of aggression involves rumor spreading to his/her peers online or in person, it is difficult for the victim to defend his/her self. Additionally, this negative or false information may continue to spread to peers online or in person over time, which also threatens social acceptance and the need to avoid further rejection as information spreads across networks.

Limitations and Future Research

As this is one correlational study, the findings should be considered in light of limitations and warrant replication. A possible limitation of this research is that we did not ask about the gender of the perpetrator in our survey when a student indicated that s/he had been victimized. When examining gender differences in victimization, it is also important to consider whether there are differences between *intra* and *inter* gender bullying among boys and girls (see Boiling, Pelphrey, & Vander Wyk, 2016). Future research should investigate whether boys and girls are more likely to use different types of aggression against their own gender or across an array of gender identities. *Same*

gender bullying and *across* gender bullying may lead to different types of aggression being used, as well as different responses to those types of aggression.

Another important limitation to our study is that we were unable to address why gender differences in bullying experiences exist. Now that we have shown that gender differences are important to consider in regard to bullying experiences, important next steps are conducting a meta-analysis of the bullying literature to assess gender differences, and then engaging in follow-up research to determine why results vary in the bullying literature regarding gender differences. Answering this question is a vital step in explaining the disparities in the literature.

Another limitation might be the time limit for behavioral responses to occur, which was six months. Students may not have had time to respond to an experience with PVRC bullying, which might explain why many students responded asocially by withdrawing. Future research should expand the window of time examined and or track bullying experiences prospectively, such as by using event diaries instead of retrospectively. More research is needed to also monitor, in general, how quickly responses occur so that we can better estimate a reasonable timeframe for assessing responses to rejection.

Finally, our focus in the current study was on attempting to discern whether or not gender is important to consider when examining behavioral responses to bullying/rejection. Although we offered the *tend and befriend* model as an over-arching framework and the gender difference in prosocial responding would support this perspective, the choice of asocial responding among boys *and* girls is open to interpretation. One way to elucidate this finding, would be to assess the reported motives underlying the response behaviors. If the *tend and befriend* perspective is correct, girls would be more likely to indicate motives that help them achieve future inclusion (even if withdrawing).

Implications

The distinction and classification of bullying into four subtypes is important for detecting and preventing bullying in schools. Direct aggression (e.g., physical, verbal) is easier to detect and report to authorities than indirect aggression (e.g., relational, cyber). Thus, a greater understanding of indirect aggression, including its negative consequences, is needed among parents, teachers, students, and school personnel. Distinction in subtypes of bullying also allows for a better understanding of gender differences in perpetration and victimization, as well as the responses to subtypes of bullying, all of which can be used to improve anti-bullying programs in schools. Part of this intervention involves recognition of types of aggression that are less monitored or recognized (e.g., cyber aggression), and these programs should be targeted towards both boys and girls.

The impacts of relational aggression, for example, are incredibly damaging; targets of this behavior experience a range of negative outcomes (Goldberg, Smith-Adcock, & Dixon, 2011), such as feeling loss of self-esteem and onset of depression (Owens, Slee, & Shute, 2000). Acute negative reactions (Goldberg et al., 2011; Reijntjes et al., 2011) and chronic future maladjustment (Crick, 1996; Crick & Grotpeter, 1995; Rudolph et al., 2009) are frequent effects of relational aggression. Relational aggression can also lead to classroom and school violence; there exists a link between relational and

physical aggression, as relational aggression often precedes physical aggression in urban school settings (Goldstein et al., 2008; Leff et al., 2010). By and large, relational aggression leads to a cycle of perpetration and victimization (Hamburger et al., 2011; Rodkin et al., 2015). Key community stakeholders (e.g., teachers, parents, counselors) must be educated on how to recognize and intervene (with the ultimate goal of prevention) when indirect and more covert forms of aggression are occurring.

Indeed, the *interaction* of students as reciprocal aggressors engaged in an on-going conflict may be important to acknowledge. Too often we conceive of bullying as the harassment of a victim by a perpetrator. However, the victim should not be conceived as merely a passive recipient of abuse, but rather actively attempting – prosocially, asocially, or antisocially – to avoid victimization. Thus, interventions could be put in place to encourage prosocial response options, with a goal of keeping victims from becoming bully-victims (Kelly et al., 2015), like many school shooters have been alleged to be. Generally, the variety of responses employed by those affected by bullies should be better explored.

Further, it is also important to consider research and policy implications for gender differences in responding to subtypes of bullying. Although we found girls are more likely than boys to respond prosocially, we also found that boys are equally likely to respond prosocially and antisocially to rejection. Thus, there may be theoretical and research implications of *tend and befriend* that should include situational or environmental variables that apply to both girls and boys. For example, is *tend and befriend* influenced by differences in the environment, such as boys in "honor states" being less likely to respond prosocially due to concerns about loss of reputations than are boys in non-honor states (Brown et al., 2009)? Future research should examine the applicability of *tend and befriend* in addition to several factors that seem to demonstrate discrepant bullying roles of girls and boys (i.e., age, geography, culture, socioeconomic status).

Tend and befriend should also be considered in interventions and programs that could increase prosocial behaviors in boys and reduce antisocial behaviors. For example, Menesini, Codecasa, Benelli, and Cowie (2003) used a befriending model and applied it to an anti-bullying intervention for both boys and girls. The intervention was shown to be effective, as it was successful in reducing negative attitudes and behaviors among middle school Italian children (Menesini et al., 2003). Researchers and policy makers in the U.S. could apply *tend and befriend* to anti-bullying interventions and campaigns, while emphasizing behaviors that boys can engage in to reduce aggressive behaviors. These implications rest mainly on literature that suggests aggressive behavior in boys is reflected through biological and social processes that induce adaptive behavior (to flee or fight) to reduce or prevent further harm, whereas girls are more likely to seek to repair relationships or protect one's social group (Lee & Harley, 2012; Taylor, 2006). However, our finding that boys also respond prosocially to aggressive behavior informs us that prosocial behaviors can be learned and should be encouraged in school environments, such as through programs that aim to improve communication skills and adaptive, cooperative behaviors.

Presently, there exists numerous national and international programs and campaigns designed to combat the presence and effects of bullying in schools and among children and adolescents. Prevention and intervention efforts include early childhood programs [e.g., Walk Away, Ignore, Talk it Out, Seek Help (WITS; Leadbetter, Woods, Yeung, Riel, & Lynch, 2011); You Can't Say You Can't Play (Paley, 1993)], social media campaigns [e.g., #StandUp (Beyond Bullies, 2016); #IAmAWitness (I Witness Bullying, 2016); #STOMPOutBullying (Stomp Out Bullying, 2016); #PostItForward

(Tumblr, 2015)], advertising campaigns [e.g., Cyber Mentors, 2016; Bully Free Me (National Education Association, 2015)], and safe school initiatives [e.g., Creating A Safe School (Ophelia Project, 2013); Project Appleseed (National Campaign for Public School Improvement, 2016)]. It is likely that multi-systemic approaches are most successful in reducing aggressive behaviors and promoting prosocial behavior and positive social relationships in schools and among children and adolescents. Prevention and intervention efforts should include training and consultation with key community stakeholders (i.e., caregivers, parents/guardians, teachers, school administration, school staff) in order to maintain changes.

Compliance with Ethical Standards

Appendix

Survey Instrument

We are interested in how students get along with one another. Please think about your relationship with other **STUDENTS AT YOUR SCHOOL DURING THE PAST SIX MONTHS**. For each of the statements, please answer questions using the scale provided.

PA Some students engage in physical aggression, such as hitting, kicking, and shoving other students. Physical aggression may also include any other attempts that have the potential to cause physical harm to another person. (PA = Physical Aggression).

VA Some students engage in verbal aggression, such as calling others names to hurt feelings, making fun of others to cause harm, or making threats of harm. Verbal aggression may also include any other attempts to cause psychological harm. (VA = Verbal Aggression).

SA Some students engage in social aggression, such as spreading rumors about other students, purposely leaving people out of social groups or social events, turning people against each other, or giving the silent treatment. Social aggression may also include any other attempts to cause social harm. (SA = Social or Relational Aggression).

CA Some students engage in cyber aggression, such as posting negative things about others online or posting/sharing inappropriate pictures by electronic means (e.g., by use of cell phones, social media, social applications, or internet access). Cyber aggression may also include any other attempts to cause harm by electronic means. (CA = Cyber Aggression).

(Note: Items are shown for one type of aggression at a time.)

CSB01 How often do you do this? _____.

CSB02 How often has this happened to you? _____.

0	1	2	3	4	5
Never	Once	Rarely	Sometimes	Almost all of the time	All of the time

If the response is more than once (response answer 2+), pop up with: "Please recall the most recent, serious incident when answering the remainder of the questions"

Negative Affect

NEGAFF.01 To what extent did this experience make you feel sad?
   NEGAFF.02 To what extent did this experience make you feel upset?
   NEGAFF.03 To what extent did this experience make you feel angry?
   NEGAFF.04 To what extent did this experience make you feel embarrassed?

0	1	2	3	4
Not at all				Definitely

Low Self-Esteem

SELF.01 To what extent did this experience make you feel bad about yourself?
   SELF.02 To what extent did this experience harm your self-esteem?
   SELF.03 To what extent did this experience make you feel as though you have few good qualities?

0	1	2	3	4
Not at All				Definitely

Response to Rejection Survey

If someone became physically aggressive (changed based on the type of aggression) towards me, I would generally respond/have responded by:
   WITH.01 Trying to avoid situations where I have to be with other people.
   WITH.02 Keeping to myself.
   WITH.03 Thinking of ways to avoid seeing people.
   WITH.04 Deciding to spend more time alone.
   ANTI.01 Getting angry and arguing with the person/persons who hurt me.
   ANTI.02 Doing to others what was done to me.
   ANTI.03 Thinking of ways to get back at the person/persons who hurt me.
   ANTI.04 Saying negative things about the person/persons to other people.
   PRO.01 Going to someone (e.g., parent, teacher, friend) for help.
   PRO.02 Working things out with the person/persons who were aggressive towards me.
   PRO.03 Doing nice things for others.

0	1	2	3	4
Not at All				Definitely

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