Abstract

This study examines how nonverbal behavior in the form of conversational distance and volume impacts bystanders’ perceptions of bullying. After watching a bullying scenario on video, participants completed measures regarding their perceptions of the bully, victim, and intentions to intervene. The results revealed an interaction between distance and volume for perceptions of the bully and victim. When they spoke in a normal conversing volume (i.e., 65 decibels), bullies were perceived to be weaker when they stood closer to victims (i.e., 18 inches apart) than when they stood further away (i.e., 4 feet). Victims were perceived as stronger when bullies stood closer and spoke at a normal volume.

Keywords: Bullying, nonverbal, proxemics, paralanguage
The Nonverbal Bully:

Effects of Shouting and Conversational Distance on Bystanders’ Perceptions

Bullying is a pervasive issue that many people experience, especially adolescents and young adults. Indeed, nearly one in seven students between kindergarten through 12th grade is either bullied or a bully (Bullyingstatistics.org, 2010). Although the negative consequences associated with bullying have received some attention (e.g., Olweus, 1991; Thornberg et al., 2012), there remains a need for additional research identifying the function of communication behavior—particularly nonverbal behavior—within these situations. Nonverbal communication plays a significant role in how decoders develop perceptions of others’ personalities including dominance, aggression, and seriousness (Dovidio & Ellyson, 1985). As such, it is likely to play a critical role in bullying interactions. The purpose of this study is to test the effects of specific forms of nonverbal behavior on bystanders’ perceptions of the bully, victim, and intentions to intervene.

Bullying behaviors are defined as repeated negative events (e.g., humiliating or harassing a victim), which over time are directed at specific individuals and are carried out by one or more persons (Baldry & Farrington, 2000; Colvin, Tobin, Beard, Hagan, & Sprague, 1998). Bullying may also assume less direct psychological forms such as gossiping, spreading rumors, or exclusion (O’Connel, Pepler & Craig, 1999). This project focuses on direct forms of bullying and involves the most typical bullying situation, verbal aggression (Aluede, Adeleke, Omoike, & Afen-Akpaiada, 2008; Langevin, 2000; Olweus, 1991). Verbal aggression involves using words that hurt or humiliate the victim through name calling, insults, or persistent torment (Langevin, 2000; Rigby, 1996). One major reason for using verbal aggression rather than physical aggression in the current study is that previous reviews of verbal aggression found that sex
differences were smaller for verbal than physical aggression (Archer, 2004; Knight, Guthrie, Page, & Fabes, 2002).

It is also important to understand characteristics and personality traits of victims. Victims are usually not aggressive, tend to have a negative self-image, and typically have trouble defending themselves against harassing person(s) (Aluede et al., 2008; Rigby, 1996). Bullies frequently target victims who are unlikely to retaliate and are different from themselves (Aluede et al., 2008).

These characteristics of bullies and victims play a critical role in determining whether bystanders of bullying events intervene or ignore the situation. Darley and Latané’s (1969) seminal work on bystander intervention asserts that bystanders will intervene if a) they believe the situation to be an emergency and b) if they are the only one present and able to intervene. In essence, the contextual cues surrounding a bullying event help dictate the likelihood that a bystander will intervene. More recent research has expanded on the idea of contextual cues by proposing a theoretical model of bystander intervention. Nickerson and colleagues’ (2014) bystander intervention model posits that would-be bystanders go through four processes before finally determining whether to intervene. These processes include first noticing the event, perceiving the event as an emergency, feeling a responsibility to intervene, and determination of what actions are appropriate for an effective intervention. This model, like Darley and Latané’s original work on bystanders, assumes that would be bystanders evaluate social cues to make an accurate decision whether to intervene or ignore a situation. However, bystander intervention may not simply be a function of social cues (e.g., number of people present) but could also be a function of nonverbal cues.
Research on perceptions of bullying has been mostly survey and/or interview based (e.g., Langevin, 2000; Olweus, 1991; Thornberg et al., 2012). This work has been primarily conducted to address the prevalence of bullying in schools, types of bullying exhibited, and the context in which intervention was most likely to take place. Face-to-face interactions contain many elements of nonverbal communication that are often overlooked in research on bullying. Many studies attempt to identify the perceptions of bullying situations by identifying the length of the bullying episode, what was said in the bullying episode, and whether respondents have been victims or witnesses of bullying (Swearer & Cary, 2003; Warden, Cheyne, Christie, Fitzpatrick, & Reid, 2003). Most of these questions deal with the verbal qualities of bullying episodes while a significant portion of the nonverbal communication is left unaccounted for.

Bullying behavior is characterized by aggression, power, and dominance. According to Dunbar and Burgoon (2005), power is the ability to influence another person’s behavior, whereas dominance represents both an individual’s temperament and the situational factors that encourage controlling behavior. Baldry and Farrington’s (2000) aforementioned definition of bullying behaviors acknowledges that there is a perception of dominance—and by proxy, power—found within these actions. Physical forms of bullying communicate a bully’s power through haptic (i.e., touch) communication, while less direct forms such as verbal harassment may rely on other nonverbal cues in order to be identified as bullying behavior. It seems reasonable to expect that certain nonverbal acts would contribute to perceptions of bullying. In order to more accurately assess how people perceive bullying events, it is important to understand how and why nonverbal behavior contributes to such perceptions. Two nonverbal elements—conversational distance and volume—may provide such contextual information and impact a bystander’s decision to intervene.
Conversational distance involves the amount of physical space between two or more communicators and is an important factor in interpersonal interaction (Hall, 1966). The *intimate* zone (0-18 inches) is reserved for family and loved ones, whereas the *social* zone (4-12 feet) is typically used in business interactions, school, and other casual interactions. People carry a high value of ownership for their personal space, and invading one’s personal space is considered a territory violation (Lyman & Scott, 1967). Related to the context of bullying, evidence shows that bystanders are more likely to intervene in bullying scenarios that are deemed dangerous and/or if they believe the victim would be physically harmed by a bully (Fischer et al., 2011; Thornberg et al., 2012).

Research on nonverbal behavior indicates that standing close to others may be interpreted as dominance. Burgoon (1991) reported that dominant individuals have a prerogative to touch others, and Hall et al. (2005) found that more dominance was associated with closer physical distance. In the bystander intervention model (Nickerson et al., 2014), the conversational distance between a bully-victim pair may serve as a cue bystanders use in interpreting the situation as an emergency that may require intervention. Relative to when they remain in the social zone, the invasion of the victim’s space that comes with standing in the intimate zone should influence the bystanders’ perceptions of the bully’s strength, victim’s weakens, and their willingness to intervene in the interaction.

Hypothesis 1: Bystanders’ perceptions of the (a) bully, (b) victim, and (c) likelihood of intervening in the bullying scenario will be affected by conversational distance. The bully will be viewed as stronger, the victim will be viewed as weaker, and participants will be more likely to intervene when the bully stands close (intimate zone) compared to further (social zone) to or from the victim.

A second nonverbal element that likely contributes to perceptions of bullying is vocalics, namely speech volume. Individuals who speak louder are seen as more dominant and angry
Extremely loud speech, such as shouting, is considered one of the easiest forms of aggression to identify across different cultures; prior research has also shown that dominant individuals tend to speak more loudly (Burgoon & Hoobler, 2002; Hall et al., 2005). From the bystander intervention model (Nickerson et al., 2014), speaking volume may serve as a cue that bystanders use to evaluate whether a given bullying interaction is an emergency. A bully who speaks louder should be perceived as more aggressive and likely to physically harm the victim. Relative to a bully who speaks at a normal conversational volume, a louder bully should be perceived as stronger, the victim should be perceived as weaker, and bystanders should be more willing to intervene.

Hypothesis 2: The (a) bully will be viewed as stronger, (b) the victim will be viewed as weaker, and (c) participants will be more likely to intervene when the bully speaks loudly compared to a normal volume.

Finally, volume and distance between a bully and victim may interact to influence bystanders’ perceptions. Louder speech should serve as a signal of aggression and make bystanders more sensitive to the bully’s distance from the victim. As such, an ordinal interaction is expected in which the effect of distance will be amplified by speech volume.

Hypothesis 3: There will be an interaction between proxemic distance and volume such that the effects of conversational distance on bystanders’ perceptions of the (a) bully, (b) victim, and (c) willingness to intervene will be stronger when the bully speaks loudly compared to a normal volume.

Method

Participants

A total of 148 undergraduate (66.2% female and 33.8% male) students at a large university were recruited to complete this study. The average age of the sample was 20.8 (SD =1.44 range 18 -29 years). The participants were predominantly white (74.3%) followed by Hispanic (10.8%), black (6.8%), Asian (4.7%) and other (3.4%). One-fifth of the sample
(20.3%) reported being bullied in high school, while almost one-third (32.4%) reported they bullied in high school.

**Design**

There were two independent variables in this study, *volume* and *distance*. *Volume* was measured using a decibel meter and was recorded with an average of 65db for the normal condition and 85db for the loud condition, which represent the levels of a typical conversation and yelling (Asha.org, 2014). The confederates in the video were trained to speak at a constant 65db for the normal condition and 85db for the loud condition. *Distance* was measured with a tape measure marking spots at 18 inches and four feet denoting the intimate and social conversational distance zones (Hall, 1966). Participants were randomly assigned to one of four conditions: Social distance/Normal volume (*n* = 36), Social distance/Loud volume (*n* = 37), Intimate distance/Normal volume (*n* = 38), and Intimate distance/Loud volume (*n* = 37).

**Procedure and Materials**

Participants were seated at a computer terminal with a headset, randomly assigned to one of the four conditions where the primary researcher observed as they watched a short (*M* = 100s), 1080p video displaying a bullying interaction, and then completed a questionnaire containing measures of the dependent variables. The videos used to manipulate the independent variables were created for this project and contained a verbally aggressive bullying situation. Confederates were recruited from a sorority and fraternity to portray the bully, victim, and the bully’s friends. The bully and the victim were portrayed as leaving a college class. The bully and victim walked to designated spots on the floor where the interaction took place (it should be noted that no other actors were present). A camera was placed at a 90-degree angle so that participants were able to see the distance between confederates. The bully then initiated a verbally aggressive situation
attempting to dissuade the victim to not join her/his respective sorority/fraternity. The bully recognized the victim as someone who was attempting to join the sorority/fraternity and used disparaging comments (i.e., “You’re never going to be more than this geek who tries to gain friends by associating with the ‘Popular People.’”) to verbally bully the victim. The victim responded with minor utterances of confusion so as to not act defensive nor particularly weak.

In order to ensure that participants interpreted the interaction as a bullying scenario, the video was introduced to participants as a situation involving a bully and a victim. Moreover, several features of the interaction were designed to be consistent with the conceptual definition of bullying. The bully and victim were shown leaving the same classroom and the bully makes reference to being in the same class as the victim. This was done to demonstrate that the bully and victim were previously acquainted. Additionally, consistent with the definition of verbal bullying, the bully used name calling (e.g., “nerd,” “socially awkward”), insults (e.g., “there’s nothing about you that stands out”), and other means (e.g., “I just don’t think you have what it takes to be considered a member.”) in an effort to hurt and humiliate the victim.

In order to account for possible sex differences in perceptions of and responses to bullying, all participants were shown an interaction between a bully and victim of their same sex. In an effort to account for other nonverbal factors that could be attributed to dominance (such as height, build, and attractiveness), the confederates serving as the bully and victim were approximately the same age (males 19, females 20), height, weight, body composition, and had similar vocal attributes measured via a stopwatch and chromatic hertz tuner. Females were trained to speak between 250-300 hz (i.e., between B3 and D4 on the chromatic scale) while men were trained to speak between 120-170 hz (i.e., between B2 and E3 on the chromatic scale). Both male and female confederates spoke at roughly the same rate (bullies had six utterances
with a total time of 44.78 seconds while victims had five utterances all ranging between 0.73 and 0.89 seconds). Confederates’ other nonverbal behavior and verbal behavior, other than distance and volume, were held constant across all conditions.

**Measures**

All measures used in this study were adapted from previous bullying research (e.g., Olweus, 1991; Swearer & Cary, 2003; Warden et al., 2003).

**Bully strength** was evaluated using four items rated on a five-point scale with the anchors *not at all* and *extremely*. Participants were asked to rate the degree to which they felt the bully exhibited the following traits: aggression, dominance, intimidation, and threatening. Larger scores indicated greater perceptions of bullying strength ($M = 3.47, SD = 0.78, \alpha = .80$).

**Victim weakness** was measured using four items rated on a five-point scale with the anchors *strongly disagree* and *strongly agree*. Participants rated the degree for which they perceived the victim to be weak, passive, bullied often, and having no friends. Larger scores indicated that the victim was perceived to be weaker ($M = 3.19, SD = 0.63, \alpha = .71$).

**Willingness to intervene** was evaluated with a single item rated on a five-point scale with the anchors *strongly disagree* and *strongly agree* that asked participants to rate the degree to which they would have stepped in to stop the bully ($M = 3.55, SD = 1.05$). Larger scores indicated that participants would be more likely to step in and stop the bully.

**Manipulation checks:** Measures were included to check for the effectiveness of the volume and distance manipulations. Two 2-item scales were created for this study. Participants rated their agreement with the statements, “The bully was yelling at the victim,” and, “The bully’s voice was louder than normal conversation,” on a five-point scale with the anchors *strongly disagree* and *strongly agree*. Larger scores indicate that the participants perceived the
bully as having louder speech ($M = 3.23$, $SD = 0.94$, $\alpha =.74$). The distance manipulation was measured by two items. Participants rated their agreement with the statements, “The bully invaded the personal space of the victim,” and, “The bully was standing extremely close to the victim,” on a five-point scale with the anchors *strongly disagree* and *strongly agree*. Larger scores indicate that participants perceived the bully as standing closer to the victim and as invading the victim’s personal space ($M = 3.09$, $SD = 1.12$, $\alpha = .89$).

**Control variable.** Although sex differences are less pronounced in verbal aggression than in physical aggression (Archer, 2004), we deemed it important to control for the effects of sex in this study. As previously noted, participants were assigned to watch a bullying interaction in which the bully and victim were the same sex as participants. In order to account for differences in males and females’ perceptions of bullying, we also included participant sex as a covariate in the analyses.

**Results**

**Preliminary Analyses**

Manipulation checks were conducted to evaluate the volume and distance manipulations. A two-way ANOVA showed that, as expected, participants reported louder speech in the loud volume condition ($M = 3.71$, $SD = .71$) than in the normal volume condition ($M = 2.76$, $SD = .90$), $F(1, 143) = 53.912$, $p < .001$, $\eta^2 = .26$. In addition, participants in the intimate distance condition perceived the bully to be standing closer to the victim ($M = 3.57$, $SD = 1.03$) than in the social distance condition ($M = 2.60$, $SD = 1.0$), $F(1, 143) = 33.370$, $p < .001$, $\eta^2 = .19$.

In addition to the manipulation checks, a series of analyses were conducted to determine whether there were any differences in participants’ previous experiences with bullying across the
four conditions. There were no main or interaction effects of distance and/or volume for participants’ self-reports of being bullied or being a bully.

**The Relationship between Distance, Volume, and Perceptions of Bullying Scenarios**

Hypothesis 1 predicted that closer distances would produce higher ratings of (a) bully strength, (b) victim weakness and (c) likelihood of intervention than farther distances. Two-way ANCOVAs controlling for participant sex showed no effects of distance on participants’ perceptions of bully strength, $F(1, 143) = 2.05, p = .15$, or victim weakness, $F(1, 143) = 1.52, p = .22$. However, there was a significant effect on the participants’ likelihood to intervene $F(1, 143) = 10.04, p = .002, \eta^2 = .06$. As illustrated in Table 1, closer distances increased bystanders’ motivation to step in and stop the bully in the situation. This effect, however, was qualified by a significant interaction effect that will be discussed shortly. Although hypothesis 1a and 1b were not supported, the results support Hypothesis 1c.

Hypothesis 2 predicted that louder speech would produce higher ratings of (a) bully strength, (b) victim weakness and (c) likelihood of intervention than would normal speech. Two-way ANCOVAs controlling for sex showed non-significant effects of volume on participants’ perceptions of bully strength, $F(1, 143) = 0.01, p = 0.93$, victim weakness, $F(1, 143) = 0.06, p = 0.81$, and likelihood to intervene, $F(1,143) = 0.22, p = 0.64$. Hypothesis 2a, 2b, and 2c were not supported.

Hypothesis 3 predicted that there would be an interaction between distance and volume on (a) bully strength, (b) victim weakness and (c) likelihood to intervene such that the effects of conversational difference would be amplified in the loud volume condition relative to the normal volume condition. Two-way ANCOVAs were conducted to test this hypothesis controlling for participants’ sex. There was a statistically significant interaction between the effects of distance
and volume on bully strength, $F(1, 143) = 5.145$, $p = .025$, $\eta^2 = .03$ and victim weakness, $F(1, 143) = 4.191$, $p = .04$, $\eta^2 = .03$. As illustrated in Table 1, pair-wise comparisons revealed that the results were inconsistent with the pattern predicted in Hypothesis 3a. The bully was perceived to be significantly less strong (or weaker) in the intimate distance/normal volume condition than the social distance/normal volume condition (see Figure 1). The same trend was observed for perceptions of the victim. Contrary to what was predicted in Hypothesis 3b, the victim was perceived to be less weak (or stronger) in the intimate distance/normal volume condition than the social distance/normal volume condition (see Figure 2). The interaction for participants’ likelihood to intervene, $F(1, 143) = 2.90$, $p = .09$, was not statistically significant. The mean scores for all dependent variables across the four interactions are reported in Table 1.

Finally, the covariate involving the sex of participants was statistically significant for perceptions of the bully, $F(1, 143) = 20.99$, $p < .001$, $\eta^2 = .12$ Women perceived the bully to be stronger than did men. The covariate was not statistically significant for the analyses involving perceptions of the victim, $F(1, 143) = 0.73$, $p = .40$, nor intentions to intervene, $F(1, 143) = 3.21$, $p = .08$.

**Discussion**

The purpose of this project was to examine the role of nonverbal behavior in perceptions of bully traits, victim traits, and likelihood to intervene in bullying interactions. Several findings were noteworthy. Consistent with expectations, the results showed that participants were more likely to intervene in a bullying interaction when bullies were in closer proximity to their victims. The degree to which bystanders find a bullying interaction to be harmful is one reason identified in previous research for intervention (Thornberg et al., 2012). The results of this study suggest that close proxemic zones represent greater victim vulnerability or potential for harm.
(see also Johnson & Aaron, 2013) and thereby encourage bystander intervention. Following the bystander intervention model (Nickerson et al., 2014), conversational distance may serve as a cue indicating that a bullying interaction is an emergency.

Volume and distance interacted to impact participants’ perceptions of the bully and victim. The means across the four conditions, however, were inconsistent with expectations. Although the bully was expected to be perceived as strongest and the victim weakest when the bully stood closely and spoke loudly, a different pattern was observed. The pairwise comparisons showed that the bully was actually perceived to be weaker and the victim stronger in the intimate distance/normal volume condition than in the social distance/normal volume condition.

One explanation for these unexpected results stems from participants’ expectations about bullying interactions. Research on bullying (Alude et al., 2008; Olweus, 1991; Peirce, 1991) indicates that people would expect bullies to speak louder and in closer proximity to their victims, whereas typical victims would maintain distance and be passive. In this project, the victim’s willingness to stand close to the bully coupled with the bully’s relatively softer speech may have made the victim seem less threatened by the bully. In other words, the intimacy expressed by close space among known acquaintances might trump perceptions of threat or dominance. By perceiving a “stronger” victim, people may underestimate the strength of the bully and, as in the bystander intervention model (Nickerson et al., 2014), perceptions that the situation represented an emergency. More broadly, the inconsistencies between the results and predictions made in this study underscore the need for additional research examining bullying situations from the perspective of bystanders.

An important observation made in this study is that bullies are viewed as stronger in social space, but observers were more likely to intervene in intimate space. There are a few
reasons why this phenomenon may occur. First, invading personal space may intensify the perception of threat to a victim thereby increasing the perceived need for bystander assistance (Johnson & Aaron, 2013). Second, when a bully appears relatively weak, it may cause the perceiver to feel more comfortable intervening. For instance, a perceiver may be more likely to break up a verbal altercation with a soft-spoken bully than an ostentatious bully.

This study is not without potential limitations. First, although it would have been ideal to stage a live bullying interaction, such an approach is fraught with ethical and logistic issues, hence the current study was limited to the use of a staged, video recorded bullying incident. Moreover, attempts were made to ensure that the interaction was realistic to participants. Actual members of a fraternity and sororities were used as confederates and the interaction took place in a building on campus where the participants attend school.

A second limitation of this study is the measurement error associated with some of the variables. Perception of the victim had an alpha = .71 and the willingness to intervene was measured with a single item. This measurement error may have attenuated the observed relationships between some of the variables. Measures such as those developed by Nickerson et al. (2014) would offer more robust tools for assessing perceptions of bullying interactions. Additionally, having participants address contextual cues of the bullying situation– including if they deem it an emergency– could help to the predict people’s likelihood to intervene.

Ideally, this study should be replicated with a design that is fully crossed by bully sex, victim sex, and bystander sex. Because men and women may interpret various social cues differently, the perceived likelihood to intervene may be affected. For instance, a female may be less likely to intervene in the presence of a male bully and victim due to a perceived lack of
efficacy, while males may be more willing to intervene in a female bully-victim situation in an attempt to be a hero. Future research would be valuable to assess this possibility.

Finally, it would be beneficial to for future studies to investigate the effects and combinations of other nonverbal behavior. One particular behavior, posture, may be strongly correlated with close proximity and perceptions of bullying (Johnson & Aaron, 2013; Johnson, 2015). For instance, individuals assuming a boxer’s stance interpersonal interaction may be perceived as more threatening if they are closer to their target/receiver.

Conclusion

Bullying represents a significant social problem. This project demonstrated the importance of conversational distance, more so than speech volume, in determining perceptions of bullying and potentially influencing bystander intervention. These findings show that despite the fact that bullies were perceived as stronger in social space, bystanders may be more likely to intervene when the bully is in the victim’s intimate space.
References


Table 1.

Mean and Standard Deviations for all Variables across Interactions.

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*Note.* Means with different subscripts are significantly different at $p < .05$. 
Figure 1. Interaction of distance and volume on mean bully traits.
Figure 2. Interaction of distance and volume on mean victim perceptions.