

The Role of Personal and Perceived Peer Norms in  
Bullying and Sexual Harassment Perpetration

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### Abstract

Bullying, cyberbullying, and sexual harassment can be impacted by both personal attitudes and perceived social norms, although few empirical studies on this topic have been conducted with high school students. In this cross-sectional study, 233 high school students completed measures about personal normative attitudes, perceptions of peer norms, and perpetration of bullying, cyberbullying, and sexual harassment. Consistent with social norms theory, students perceived themselves to hold more prosocial (i.e., anti-bullying/anti-sexual harassment) personal normative attitudes than they perceived the typical student in their school to hold (i.e., peer norms). Path analyses revealed that students' personal normative attitudes (e.g., anti-bullying/anti-harassment) were negatively related to their bullying, cyberbullying, and sexual harassment perpetration, although perceived peer norms were negatively related to sexual harassment perpetration only. Multiple-group path analysis revealed significant gender differences. Personal normative attitudes related to females' behavior for all forms of perpetration and only sexual harassment and cyberbullying for males (with more anti-bullying/anti-harassment attitudes relating to less perpetration), although associations for males were stronger. Perceived peer norms related to bullying perpetration for males only. Results are discussed with regard to social-cognitive and peer contextual factors and implications for social norms interventions.

Key words: social norms, personal attitudes, peer norms, bullying, cyberbullying, sexual harassment

**Impact and Implications Statement:** This study found that high school students view themselves as being more prosocial (i.e., anti-bullying/anti-sexual harassment) than their peers. These personal attitudes related to students' self-reported perpetration of bullying, cyberbullying, and sexual harassment. Females with more prosocial attitudes were less likely to engage in bullying, cyberbullying, and sexual harassment. Males with prosocial attitudes were less likely to sexually harass others; males' perceptions of peer norms also related to their bullying behavior.

### **The Role of Personal and Perceived Peer Norms in Bullying and Sexual Harassment Perpetration**

Bullying, cyberbullying, and sexual harassment are prevalent concerns for students in schools. A meta-analysis of 80 studies with youth ages 12 – 18 found that 34.5% were perpetrators of traditional (i.e., non-cyber forms e.g., physical, verbal, relational) bullying and 36% were victims of traditional bullying; 15.5% and 15.2% were cyberbullying perpetrators and victims, respectively (Modecki et al., 2014). Prevalence rates of sexual harassment are also high, with 30% to 81% of middle and high school students reporting victimization (AAUW, 2001; Clear et al., 2014). Although bullying peaks in middle school, it continues in high school, and sexual harassment becomes more prevalent in high school and extends into college (Felix & McMahon, 2006; McGinley et al., 2016; Pepler et al., 2006). There is substantial overlap between bullying and sexual harassment; both are hostile and unwanted aggression that can be verbal, physical, relational, or cyber (Gruber & Fineran, 2007; Poteat & Espelage, 2005; Shute et al., 2008). Furthermore, homonegativity (previously referred to as homophobia but now called homonegativity given the recognition that this response, attitude, and behavior is the product of social and political stigma and bias; Berg et al., 2016) overlaps with sexual harassment and is the most prevalent form of verbal bullying in schools (Anagnostopoulos et al., 2009; Kosciw et al., 2008). Further, there is a high correspondence between sexual harassment victimization and perpetration ( $r = .54$  for females,  $r = .70$  for males; Fineran & Bolen, 2006), although there are also some distinctions between the two constructs. Bullying is unwanted, repeated aggressive behavior that involves an observed or perceived power imbalance (Gladden et al., 2014). Sexual harassment is unwanted sexual behavior that interferes with a person's life (American Association of University Women [AAUW], 2001; Felix & McMahon, 2006).

Both bullying and sexual harassment can have serious proximal and long-term negative consequences including internalizing symptoms, suicidality, substance use, and dating violence (Debnam et al., 2016; Espelage et al., 2012; Livingston et al., 2019; Marschall-Levesque et al., 2017). Bullying perpetration is best explained through a social–ecological lens given that individual characteristics are largely influenced by social contextual environments (Hong & Espelage, 2012). Both bullying and sexual harassment occur and are reinforced within similar peer contexts (Espelage et al., 2003; Low et al., 2013). School psychologists are expected to take an active role in student level and systems level bullying prevention (Elbedour et al., 2020; National Association of School Psychologists, 2019). Given the prevalence and consequences of bullying and sexual harassment, it is important to better understand individual and peer context contributors to this behavior to inform prevention and intervention efforts. In the present study, we examined the extent to which high school students’ personal normative attitudes towards bullying and sexual harassment and perceived peer norms related to perpetration of bullying, cyberbullying, and sexual harassment. We also examined gender differences in these associations.

### **Personal Normative Attitudes and Perceived Peer Norms**

Aggression arises from a combination of dispositional factors (e.g., biology, personality) and cognitive processes (e.g., schemas, scripts, normative beliefs and attitudes; Blankenship et al., 2019; Huessman, 2018). This behavior is acquired through observational learning from families, peers, and media, which interact with situational variables (Blankenship et al., 2019; Huessman, 2018). Within this conceptualization and other social-cognitive models, aggression is influenced in part by one’s attitudes and beliefs (Blankenship et al., 2019), which is the focus of the current study. There is empirical support that personal normative beliefs (e.g., positive

attitudes toward bullying) are associated with bullying perpetration, although the relation is often modest (Álvarez-García et al., 2015; Espelage et al., 2018; Salmivalli & Voeten, 2004; Williams & Guerra, 2007). Relatedly, homonegative attitudes are bidirectionally related to homonegative bullying perpetration (Orue & Calvete, 2018). Sexual harassment perpetration is also influenced by personal normative beliefs, such as attitudes supportive of traditional gender stereotypes (Miller et al., 2020; Mumford et al., 2020).

In terms of contextual or situational factors, it is well-recognized that bullying and sexual harassment are negative social events implicitly and explicitly supported by peers (Espelage et al., 2003; Jones et al., 2012; Low et al., 2013; Salmivalli & Voeten, 2004). Children and adolescents tend to associate with peers who engage in a similar degree of bullying and aggressive behavior (Espelage et al., 2003), and social groups may be organized around different roles in bullying situations (Salmivalli et al., 1997). In addition, witnessing peers engage in gender-based harassment and other abusive behavior toward females is a strong predictor of multiple forms of adolescents' perpetration of violence, including bullying and sexual harassment (Miller et al., 2020; Tam et al., 2019). There has been particular emphasis on the peer influences on males' violence perpetration (Berkowitz et al., in press; Miller et al., 2020). A review of research examining adolescent susceptibility to peer pressure, however, found mixed results, with some studies showing that males are more susceptible to deviant peer pressure and others showing no significant differences based on gender (McCoy et al., 2019).

It is not only peers' behavior that may influence an individual to engage in bullying or sexual harassment, but the perception or misperception of peer attitudes or social norms (Nickerson & Mele-Taylor, 2014; Perkins et al., 2011). Social norms specify the behaviors that are acceptable and which behaviors will elicit approval within the peer context, which can be

particularly relevant in ambiguous situations (Van Hoorn et al., 2017). Social norms theory and research operates on the premise that most people have misperceptions about their peers' attitudes, beliefs, and behaviors (e.g., people think their peers are more supportive of problematic behavior than they actually are), which influence behavior (Perkins et al., 2005, 2011). Studies of middle school students have shown they perceive their peers to be more approving of bullying than is warranted by peers' self-reported attitudes and behaviors (Dillon & Lochman, 2019; Perkins et al., 2011; Sandstrom & Bartini, 2010). For example, 94% of 7<sup>th</sup> grade students misperceived the norm by rating their peers' attitudes lower than the actual group norm, which was operationalized as the mean of all participants' attitude ratings (Dillon & Lochman, 2019). In another study, students reported that their peers bullied others three to four times more often than was indicated by self-reported bullying perpetration (Perkins et al., 2011). These perceptions of higher rates of peers' bullying behaviors and pro-bullying attitudes than are actually reported have been associated with middle school students' greater likelihood of perpetrating bullying (Nickerson & Mele-Taylor, 2014; Perkins et al., 2011).

Although the aforementioned research provides preliminary support for misperceptions of peer norms, it has been limited to middle school students and bullying, as opposed to examining high school students' personal and perceived peer norms in relation to multiple forms of violence perpetration, such as bullying, cyberbullying, and sexual harassment. Peer influence, norms and expectations are particularly salient in adolescence, and have been shown to relate to a wide range of risk-taking behaviors during this developmental period (McCoy et al., 2019; Van Hoorn et al., 2017). In addition, the nature of peer victimization changes over adolescence, becoming more covert, relational, and accepted by peers (Troop-Gordon, 2017), and sexualized as adolescents become increasingly preoccupied with developing their sexual identity and

attracting potential partners (Pellegrini, 2002). Another important reason to study these processes in high school is because bullying prevention programs are largely ineffective in high school, likely due in part to their inattention to adolescent culture and the peer context (Yeager et al., 2015).

### **Gender Differences in Bullying, Sexual Harassment, and Normative Influence**

Gender identity theory posits that self and societal perceptions of masculine and feminine identity cuts across social situations, as our actions can be interpreted as exemplifying gender identity (Vantieghem et al., 2014). Gender is relevant for bullying and sexual harassment, as females are typically viewed as more empathic and relationally-oriented, whereas males are expected to be dominant and aggressive (Brown et al., 2020; Fox et al., 2014). Males tend to perpetrate traditional bullying and sexual harassment more often than females (Espelage et al., 2016, Smith et al., 2019) and females tend to be targets of sexual harassment more often than males (Gruber & Fineran, 2008). Gender differences in cyberbullying have been more variable, with some studies finding females to be more frequent victims of cyberbullying than males (Nickerson et al., 2014; Smith et al., 2019), and others finding that gender differences are moderated by age, with females reporting higher cyberbullying perpetration rates in early adolescence and males reporting higher rates in late adolescence (Barlett & Coyne, 2014).

There is scant research examining gender differences regarding personal normative attitudes, perceived peer norms, and their relation to bullying, cyberbullying, and sexual harassment perpetration in adolescent samples. Although not focused on norms or attitudes specifically, several studies have shown that females are more likely to recognize bullying as harmful and experience more emotional distress when witnessing or being victimized by bullying (Jenkins & Nickerson, 2019; Thornberg & Jungert, 2013; Werth et al., 2015). Female

students in middle and high school also tend to have more positive perceptions of peer norms around active bystander behavior than males (Kubiszewski et al., 2018), and are more likely to defend peers who are bullied (Jenkins & Nickerson, 2019; Nickerson et al., 2008). Relevant research has indicated that male college students underestimate their peers' intervention behaviors and attitudes and that these perceived social norms are associated with males' own behavior in intervening in sexual assault situations (Brown & Messman-Moore, 2010; Fabiano et al., 2003).

### **Current Study**

Despite the importance of personal normative attitudes and perceived peer norms in bullying and sexual harassment (Espelage et al., 2018; Perkins et al., 2011), there are very few studies examining these relations, particularly in high school students and in relation to sexual harassment in a general population of male and female students. The purpose of the current cross-sectional study was to examine the influence of personal normative attitudes and perceived peer norms about bullying and sexual harassment on the perpetration behaviors of high school students. The research questions are (1a) Do students' personal normative attitudes differ from their perceptions of peer norms regarding bullying and sexual harassment? (1b) Are there gender differences? (2) To what extent do one's personal normative attitudes and perceived peer norms about bullying and sexual harassment relate to one's self-reported perpetration? (3) Do personal normative attitudes and perceived peer norms relate to perpetration differently for male and female high school students?

We hypothesized that high school students would perceive themselves to be more prosocial (e.g., anti-bullying/anti-sexual harassment) than they perceived their peers to be, consistent with past research with middle school students (Dillon & Lochman, 2019; Perkins et

al., 2011; Sandstrom & Bartini, 2010). We also anticipated that females may report more prosocial (e.g., anti-bullying) personal normative attitudes than males (Jenkins & Nickerson, 2019; Kubiszewski et al., 2018), and that males may hold more misperceptions about their peers' norms (Fabiano et al., 2003). With regard to Research Question 2, we hypothesized that both personal normative attitudes and perceived peer norms that are supportive of bullying, cyberbullying, and sexual harassment would relate to self-reported perpetration of these behaviors (Nickerson & Mele-Taylor, 2014; Perkins et al., 2011). We further expected that perceived peer norms may have a stronger influence on males' perpetration (Brown & Messman-Moore, 2010).

## Method

### Participants and Procedure

After receiving Institutional Review Board approval, parental consent forms were distributed to 361 students grades 9-12 (approximately 35% of the school's population) in 16 classes at a suburban high school in the northeastern United States. Of those students, 255 obtained parental consent and were in attendance on the day of survey administration (71% response rate). Two students declined to take the survey, three students took the wrong survey due to a technical error, and twelve students' data were removed from the analyses because they responded to the validity item "I am telling the truth (I have not intentionally lied) on this survey" by indicating *disagree* ( $n = 2$ ) or *strongly disagree* ( $n = 10$ ). Adding such validity items has been demonstrated to improve the quality of adolescent survey data (Cornell et al., 2012).

The current analyses examine gender as a variable; thus, only the 233 students who described themselves as female ( $n = 137$ ; 58.8%) or male ( $n = 96$ ; 41.2%) were included (excluded three students who did not identify their gender, one who identified as transgender,

and one who identified as gender non-conforming). Demographic information for the sample and for the school population is displayed in Table 1. The sample for the current study was slightly overrepresented for females and slightly underrepresented by White students compared to the overall school population. Although students were not asked about their socioeconomic status, the school is in a relatively affluent community (8% of students eligible for free or reduced lunch). Research staff followed standardized instructions to administer the survey to students electronically via Survey Monkey in their respective classes in the fall of 2019.

## Measures

As described below, some of the measures were adapted from their original form (i.e., surveys measuring peer norms, personal norms, sexual harassment, and cyberbullying); therefore confirmatory factor analyses were conducted in Mplus. Model fit was evaluated holistically, meaning that several fit indices were considered and if the majority of the measures suggested adequate fit, the decision was made to move ahead with analyses. In terms of fit indices, it is preferable to have a nonsignificant  $\chi^2$ , but since this index is sensitive, other fit indices are given more weight in examining model fit. Guidelines suggest that Comparative Fit Index (CFI) should be above .90, Standardized Root Mean Square Residual (SRMR) below .08, root mean square error of approximation (RMSEA) less than .10 but preferably below .07 (Hooper et al., 2008; Hu & Bentler, 1999; Little, 2013).

***Personal and perceived peer norms toward bullying and sexual harassment.*** The current study used an expanded version of Nickerson et al.'s (2014) 6-item *Attitudes Toward Bullying and Sexual Harassment* scale ( $\alpha = .87$ ). We added two items to assess attitudes toward bullying and harassment perpetrated specifically via electronic communication (e.g., "Students should NOT insult others on social media"), yielding an 8-item scale for personal normative

attitudes ( $\alpha = .90$ ). Following guidance for assessing perceptions of peer norms (Haines et al., 2005; Perkins et al., 2011), parallel questions were added for each of the eight items by prefacing each personal statement with “The typical student at my school believes...(e.g., students should NOT insult others on social media”) to create an 8-item scale to assess perceived peer norms ( $\alpha = .86$ ). Participants responded on a 4-point Likert response scale ranging from *Strongly disagree* (0) to *Strongly agree* (3). Higher scores indicated more prosocial (i.e., anti-bullying/anti-harassment) norms.

For the peer norm measure, the model fit for the data was acceptable ( $\chi^2 = 47.04, p < .001$ , CFI = .972, RMSEA = .076, Tucker-Lewis index [TLI] = .96, SRMR = .03). All eight items were positively and significantly related to the overall Peer Norm factor. For the personal norms measure, the model fit for the data was also acceptable ( $\chi^2 = 87.62, p < .001$ , CFI = .91, RMSEA = .086, TLI = .93, SRMR = .042) with the addition of one covariance between two of the items. All items were significantly and positively related to the factor score, Personal Norms.

***Bullying Participant Behaviors Questionnaire: Bully Scale (BPBQ; Demaray et al., 2014).*** The BPBQ is a self-report survey designed to explore five different participant roles in bullying behavior (bully, assistant, victim, defender, and outsider). The current study utilized the 10-item bully role subscale, which assesses the frequency with which an individual perpetrates physical, verbal, and relational bullying (e.g., “I have called another student bad names”). Participants were instructed to report about the frequency of their behavior in the past 30 days and answer on a 5-point response scale ranging from 0 (*never*) to 4 (*7 or more times*). Previous research on this scale suggests there is appropriate evidence of reliability and validity in terms of internal consistency, factor structure, and convergent and divergent validity in terms of being correlated with similar subscales (e.g., bully and assistant) and with measures assessing similar

constructs (Demaray et al., 2014). In the current study, the bullying subscale demonstrated good internal consistency ( $\alpha = .88$ ).

**Cyberbullying.** The cyberbullying and aggression scale assessed perpetration of bullying and sexual harassment via electronic communication, using six items from the Internet Harassment Perpetration scale that were validated through exploratory and confirmatory factor analysis (Ybarra et al., 2007) and three items from Kwon et al.(2020) that were created based on input from previous focus groups with female adolescents. The potential platforms for perpetration were expanded to include other types of electronic communication, (e.g., texting, FaceTime, etc.). Example items include “I made someone feel worried or threatened by bothering or harassing them through electronic communication” and “I tried to get someone to talk about sex through electronic communication when they did not want to.” Respondents reported on how frequently they engaged in each behavior within the past 6 months using a 7-point scale ranging from 0 (*never happened*) to 6 (*every day or almost every day*);  $\alpha = .91$ . Since items were adapted from other scales, a confirmatory factor analysis in Mplus was conducted. The model fit for the data was acceptable ( $\chi^2 = 35.44$ ,  $p < .001$ , CFI = .990, RMSEA = .086, TLI = .985, SRMR = .032). All items were significantly and positively related to the Cyberbullying factor.

**AAUW Sexual harassment perpetration (Hill & Kearl, 2011).** Sexual harassment perpetration was measured with a seven-item scale adapted from Hill and Kearl (2011). This scale assessed the frequency with which students perpetrated sexual harassment on a seven-point scale from *Never happened* (0) to *Every day or almost every day* (6). Participants indicated how often over the prior six months they engaged in a number of different sexually harassing behaviors (e.g., showed sexual pictures, spread sexual rumors, touched in an unwelcome sexual

way). This scale has been shown to have adequate construct validity (Walters & Espelage, 2020). The internal consistency coefficient for this scale was .85 in the current study. Some items were adapted, so a confirmatory factor analysis in Mplus was conducted. The model fit for the data was acceptable overall ( $\chi^2 = 26.11$ ,  $p < .001$ , CFI = .906, RMSEA = .077, TLI = .821, SRMR = .050). All items were significantly and positively associated with the overall factor.

### **Data Analyses**

IBM SPSS Statistics 24 was used to calculate missing data frequencies, descriptive statistics, and intercorrelations among study variables. Data on study variables for the full sample were missing in amounts ranging from 0 to 1.3% and were missing completely at random according to a Little Missing Completely at Random (MCAR) analysis,  $X^2 = 419.34$   $df = 383$ ,  $p = .079$ . Therefore, missing data were addressed with pairwise deletion when participants had two or more data points missing from a scale or subscale; if a participant had only one data point missing from a scale or subscale, the participant's mean for the remaining items was used as a replacement (Dodeen, 2003). Data screening procedures examined all variables for outliers (i.e.,  $|z\text{-score}| > 3.29$ ), the dependent variables for non-normality, and the independent variables for multicollinearity. The variables with outliers, and the corresponding number of outliers, are as follows: Personal normative attitudes (referred to as Personal Norms) (3), Perceived Peer Norms (1), BPBQ-Bully (6), Cyberbullying (2), AAUW Sexual Harassment (5). As suggested by Tabachnick and Fidell (1996), the impact of these outliers was reduced either by changing the value to make it only one unit more extreme than the closest non-outlier score or by transforming the affected variable. To address positive skewness and/or kurtosis (i.e.,  $|z\text{-score}| > 3.29$  and Shapiro-Wilk  $W < .98$ ), as well as outliers, the BPBQ – Bully, Cyberbullying, and Sexual Harassment scales were inverse transformed; variables were more normally distributed after

transformation. Outliers were changed for Personal Norms and Perceived Peer Norms.

Multicollinearity was not found among the independent variables (all  $r$ 's < .50 and Variance Inflation Factor [VIF] values < 2).

To answer the first research question, a two-way mixed ANOVA (Gender— male vs. female x norm type — personal vs. perceived peer) was conducted using SPSS to test whether students' personal norms differed from their perceptions of peer norms regarding bullying and sexual harassment, as well as whether there were differences by gender. Path analysis using Mplus 8.0 (Muthén et al., 2017) was used to answer Research Questions 2 and 3. To account for nonnormality, the robust maximum likelihood (MLR) estimation procedure was utilized. Model fit statistics are not reported because the models were saturated (i.e., all parameters were identified; Little, 2013). Research Question 2 tested the conceptual model presented in Figure 1. Path analysis was conducted to allow us to examine our multiple outcomes of interest in one model and to account for the overlap in these outcomes. This model contains two exogenous variables (i.e., Personal Norms and Peer Norms) and three endogenous variables (i.e., the three types of perpetration: Bullying, Cyberbullying, and Sexual Harassment Perpetration). There were four covariances (represented by the curved double-headed arrows in Figure 1) added to the model to account for the overlap between the personal norms and peer norms (1 covariance) and the three types of perpetration (3 covariances).

For the third research question, a multiple-group path analysis model was tested to see if the path model was the same for male and female participants. Multiple-group path analysis consists of testing the path model with the parameters constrained and unconstrained across the grouping variable (i.e., gender). A chi-square difference test was used to determine if there is a significant difference between the chi-square estimates for the constrained and unconstrained

models. If the chi-square difference test indicated a statistically significant difference in the chi-square estimate between the constrained and unconstrained models, there was support that there is a difference in the models across gender. Follow-up chi-square difference testing was used to compare the strength of each path (i.e., six paths from attitudes to perpetration) across gender. All chi-square difference tests were performed in Excel.

## Results

### Preliminary Analyses

Means, standard deviations, and bivariate correlations of the study variables are presented in Table 2 for male and female students. For ease of interpretation and comparison, means and standard deviations are presented using untransformed values. All other results are based on the transformed data.

### Research Question 1: Personal and Peer Norm Differences

Results of the ANOVA showed significant main effects of norm type (i.e., personal vs. perceived peer),  $F(1, 231) = 460.24, p < .001, \eta^2 = .67$ , and gender,  $F(1, 231) = 12.21, p < .01, \eta^2 = .05$ , as well as a significant norm type by gender interaction,  $F(1, 231) = 24.88, p < .001, \eta^2 = .10$  (see Figure 2). Simple effects tests demonstrated that although there was no significant difference between males' ( $M = 15.22, SD = 4.43$ ) and females' ( $M = 15.20, SD = 3.79$ ) perceptions of their peers' anti-bullying/harassment norms,  $F(1, 231) = .002, p = .963$ , all other comparisons were significant. Males' personal norms ( $M = 19.62, SD = 3.39$ ) were more prosocial than their perceptions of peers' norms,  $F(1, 231) = 115.27, p < .001$ ; similarly, females saw their personal norms ( $M = 22.26, SD = 2.13$ ) as more anti-bullying/harassment than their peers',  $F(1, 231) = 424.22, p < .001$ . However, the effect was more pronounced for females as

they viewed themselves to be significantly more anti-bullying/harassment than males viewed themselves,  $F(1, 231) = 53.30, p < .001$ .

### **Research Question 2: Personal and Peer Norms Relating to Perpetration**

To answer the second research question, a path analysis was conducted with the full sample. See Figure 3 for a diagram of the model with standardized path coefficients and Table 3 for standardized and unstandardized path coefficients, standard errors, and  $p$ -values for all paths. Results reveal a statistically significant and negative relation between Personal Norms and each type of perpetration, namely Bullying ( $\beta = -.308, p = .010$ ), Cyberbullying ( $\beta = -.465, p < .001$ ), and Sexual Harassment ( $\beta = -.482, p < .001$ ). Results for Perceived Peer Norms reveal fewer significant relations. There was a statistically significant negative relation between Perceived Peer Norms and Sexual Harassment ( $\beta = -.158, p = .031$ ), but the paths between Perceived Peer Norms and Bullying ( $\beta = -.018, p = .057$ ) and Cyberbullying ( $\beta = -.014, p = .139$ ) were not significant.

### **Research Question 3: Gender Differences in Personal and Perceived Peer Norms and Perpetration**

The chi-square difference test from the multigroup path analysis revealed a significant difference between the unconstrained and constrained model ( $\chi^2 \text{ diff} = 40.525, p < .001$ ), suggesting that the model differed for males and females. Next, each of the six paths between norms and perpetration (i.e., single-headed arrows on Figure 4) were tested to see if there were significant differences in the strength of the path for males and females. Chi-square difference tests revealed that four of the six paths were significantly different for males and females. Figure 4 shows the standardized coefficients for males and females on all parameters, and Table 3

shows unstandardized and standardized coefficients, standard errors, and  $p$ -values for the six paths between attitudes and perpetration.

Personal Norms were negatively and significantly associated with Sexual Harassment and Cyberbullying perpetration for males ( $\beta = -.438$ ,  $p < .001$  and  $\beta = -.475$ ,  $p = .006$ , respectively) and for all three types of perpetration for females (Bullying,  $\beta = -.224$ ,  $p = .014$ , Cyberbullying  $\beta = -.229$ ,  $p = .011$ ), and Sexual Harassment  $\beta = -.318$ ,  $p < .001$ . These associations were significantly stronger for males for Bullying ( $\chi^2 \text{ diff} = 7.417$ ,  $p < .01$ ) and Cyberbullying ( $\chi^2 \text{ diff} = 16.39$ ,  $p < .001$ ). Perceived Peer Norms were negatively and significantly related to Bullying for males ( $\beta = -.281$ ,  $p = .022$ ). Though no other paths were statistically significant, chi-square difference tests indicated that the paths from perceived peer norms to cyberbullying and sexual harassment were significantly different for males and females, with small positive associations for females and inverse associations for males (see Table 3).

### Discussion

Bullying, cyberbullying, and sexual harassment are influenced by personal attitudes and beliefs (Álvarez-García et al., 2015; Espelage et al., 2018; Salmivalli & Voeten, 2004; Williams & Guerra, 2007) and the peer context (Espelage et al., 2003; Jones et al., 2012; Low et al., 2013; Salmivalli & Voeten, 2004), yet there is a surprising lack of empirical studies examining how personal normative attitudes and perceived peer norms relate to perpetration of these behaviors in adolescence. Gaining insight into this may be important in guiding interventions, particularly in light of findings that existing bullying prevention programs in high schools are ineffective and may not take into account the importance of the attitudes and peer culture of adolescents (Yeager et al., 2015). Results from this study support the premise of social norms interventions that there is a gap between what individuals perceive their peers to think and the peer group's actual

reported attitudes (Perkins et al., 2005, 2011) regarding bullying, cyberbullying, and sexual harassment. In addition, personal norms and perceived peer norms related to perpetration, although results varied by type of perpetration and gender.

### **Personal and Peer Norm Differences**

As hypothesized, students in our sample perceived themselves to hold more prosocial (e.g., anti-bullying/anti-harassment) personal normative attitudes than they perceived the typical student in their school (i.e., peers) to hold. This is consistent with empirical studies of younger students with regard to bullying (Dillon & Lochman, 2019; Perkins et al., 2011; Sandstrom & Bartini, 2010). It also supports social norms theory, which rests on the assumption that individuals hold more positive attitudes about their own beliefs and behaviors than they do about their peers' (Perkins et al., 2005, 2011). Females viewed themselves to be significantly more anti-bullying/anti-harassment than did males, although there were no differences between males' and females' perceptions of the peer norms. The finding that female students have more prosocial (e.g., anti-bullying) personal normative attitudes than males is aligned with earlier research indicating that females are more distressed about bullying as a problem (Jenkins & Nickerson, 2019; Thornberg & Jungert, 2013; Werth et al., 2015) and are more likely to intervene to help bullied peers (Jenkins & Nickerson, 2019; Nickerson et al., 2008).

### **Personal and Peer Norms Relating to Perpetration**

Students' personal normative attitudes (e.g., anti-bullying/anti-harassment) were inversely related to their bullying, cyberbullying, and sexual harassment perpetration, consistent with social-cognitive models conceptualizing aggression being influenced in part by one's attitudes and beliefs (Blankenship et al., 2019). Findings from the current study also expand on existing research indicating that attitudes are related to bullying perpetration (Álvarez-García et

al., 2015; Espelage et al., 2018; Salmivalli & Voeten, 2004; Williams & Guerra, 2007) by applying this to cyberbullying and sexual harassment, as well. Results of our study also revealed negative relations between perceived peer norms and sexual harassment perpetration; however, peer norms did not relate to bullying and cyberbullying. Sexual harassment and relational forms of bullying may be more salient than some traditional (e.g., physical) forms of bullying, consistent with prior findings that bullying in high school can evolve to take the form of sexual harassment (Espelage et al., 2012; Pelligrini, 2002). It may be that the peer norms and culture were particularly relevant in relation to this form of perpetration.

### **Gender Differences in Personal and Perceived Peer Norms and Perpetration**

With regard to gender differences, personal normative attitudes were related to females' behavior for all forms of perpetration and only sexual harassment and cyberbullying for males, although associations for males were stronger. These findings suggest that females' beliefs may relate to their behavior across domains, whereas males' attitudes may have more specific and stronger influences. It is also possible that factors other than personal attitudes are influencing males' bullying behavior. Indeed, our results showed that perceived peer norms related to males' bullying perpetration. Interestingly, the relation between peer attitudes and sexual harassment and cyberbullying showed significant differences between males and females, although the paths were not significant, likely due to the relatively small sample size. The finding that peer attitudes contributed significantly to males' bullying perpetration suggests that males may be more impacted than females by the influence of peers. Research on adolescent susceptibility to peer pressure has yielded mixed results, with some studies showing that males are more susceptible to deviant peer pressure and others showing no significant gender differences (McCoy et al., 2019). In a relevant study with a male college sample, perceived peer norms, but not personal attitudes,

were associated with willingness to intervene in sexual assault situations (Brown & Messman-Moore, 2010).

### **Implications for Practice**

Overall, results from this study support the premise behind social norms interventions that there is a gap between what individuals perceive their peers to think and what their peers actually think (Perkins et al., 2005, 2011) as applied to bullying, cyberbullying, and sexual harassment. As Dempsey et al. (2018) noted in their critical appraisal of the social norms approach, many studies fail to specify whether the norms and attitudes were assessed from the sample when developing the intervention or test how the perceived peer norms (or misperceptions about peer norms) influence personal behaviors. The current study addressed both of these issues, and may set the stage for using a social norms intervention to present correct information about peer group norms in order to reduce perceived peer pressure and increase the likelihood that individuals will express healthy attitudes (Berkowitz, 2004). School psychologists, in their work with individual students or at a school-wide level, should consider providing psychoeducation and presenting correct information about peer norms to students to help them reframe issues and engage in prosocial behavior.

Social norms campaigns have been used by some middle and high schools to target issues such as rumor spreading (Cross & Peisner, 2009), bullying (Perkins et al., 2011), and harassment (Paluck & Shepherd, 2012), finding that these can lead to changes in perceived norms. In addition, school psychologists have indicated that school-wide practices, such as Positive Behavior Intervention Services or school-wide campaigns, are both the most effective at reducing bullying, but also approaches that need improvement in schools (Sherer & Nickerson, 2010). Findings from the current study suggest that males may be particularly impacted by their

perceptions of their peers' attitudes and behaviors; thus, social norms interventions that aim to educate people on healthier normative attitudes may be particularly important for males in high schools. Indeed, this has been recognized in the broader sexual assault field, where men have been the focus of social norms and other interventions (Fabiano et al., 2003).

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

There were several limitations of the current study. The study was cross-sectional, so causality between norms and behavior cannot be inferred. In addition, all measures were self-report. Although self-report is important and necessary for the social norms approach, future research should assess perpetration by peer or school report to overcome limitations of possible social desirability or under-reporting of aggression (Dempsey et al., 2018). It is possible that discrepancies between self-report of perceived peer attitudes compared to the group norm of mean self-reported scores reflects issues of bias of self-report or social desirability as opposed to misperceptions, *per se*. It would also be helpful to assess the collective perception of social norms instead of examining these perceptions at the individual level, as this would be more aligned with the definition of social norms. Future research could also examine the interaction or discrepancy between personal and perceived peer norms in relation to perpetration. This would be important not only to examine social cognitive theory more comprehensively but also to further examine social norms theory from the discrepancy aspect. Furthermore, personal and perceived norms should be explored in relation to other bullying behaviors (e.g., defending, assisting), which can be done with the BPBQ measure.

Another limitation is that the peer norms were largely attitudinal as opposed to behavioral. The social norms approach uses both injunctive norms, or what one believes most others morally approve of, and descriptive norms, which refer to what most others do (Cialdini et

al., 1990). Therefore, it will be important for future research to assess descriptive peer norms (e.g., perceptions of peer's actual behaviors), as well. In addition, we included all forms of bullying and sexual harassment (e.g., physical, verbal, relational and cyber) and did examine each form separately, which may have helped further explain some of the gender differences. This would be an important direction for future research. Finally, the current study focused on a relatively small sample of predominantly White students from one suburban high school in a relatively affluent community, so results cannot be generalized to more diverse samples from other settings. It is also possible that with a larger sample size, there would be more significant paths in the multiple-group models.

## **Conclusion**

Despite these limitations, the current study adds to the literature on the social-cognitive and peer (e.g., personal normative attitudes, perceived peer norms) influences on bullying, cyberbullying, and sexual harassment in adolescence, and gender differences in these constructs and relations. Findings that high school students perceived their peers to be more supportive of bullying, cyberbullying, and sexual harassment than they themselves are supports the theory and underlying assumptions of social norms approaches. In addition, students' self-reported perpetration of all three forms of aggression were related to their own attitudes, associations that have implications for interventions that target cognitions and behaviors. Furthermore, perceived peer norms were associated with sexual harassment perpetration for the whole sample, indicating that the peer culture surrounding sexual harassment may be particularly salient for high school students. When examining these effects by gender, however, perceived peer norms related to bullying perpetration, and only for males, suggesting that high school males may be particularly influenced by their peers.

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**Table 1***Demographics for Sample and School*

	Sample	School
	N = 233	N = 1,007
<b>Gender</b>		
Male	96 (41.2%)	49%
Female	137 (58.8%)	51%
<b>Race/Ethnicity</b>		
White	145 (62.2%)	71%
Asian/Hawaiian/Pacific Islander	66 (28.3%)	19%
Black/African American	5 (2.1%)	3%
American Indian/Alaskan native	2 (.9%)	1%
Multiracial	12 (5.2%)	4%
Hispanic/Latinx <sup>a</sup>	10 (4.3%)	3%
<b>Grade</b>		
9 <sup>th</sup>	57 (24.5%)	24%
10 <sup>th</sup>	63 (27.0%)	24%
11 <sup>th</sup>	51 (21.9%)	24%
12 <sup>th</sup>	62 (26.6%)	28%

**Note.** <sup>a</sup> Hispanic/Latinx was asked as a separate question about ethnicity in the survey; thus percentage for race/ethnicity are higher than 100%. School-reported data included Hispanic/Latinx in a combined race/ethnicity category.

**Table 2**

*Means, Standard Deviations, and Bivariate Correlations of Main Study Variables for Males and Females*

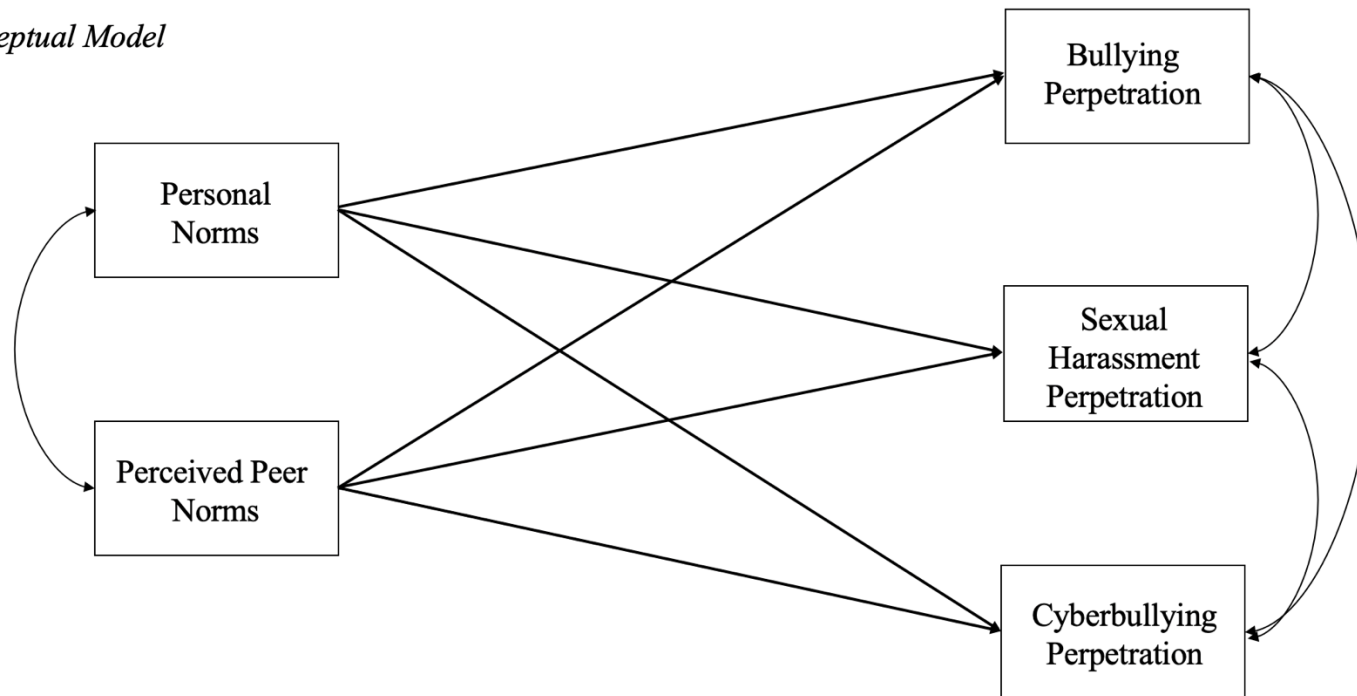
Variable	Males	Females	1	2	3	4	5
	<i>M</i> (SD)	<i>M</i> (SD)					
1. Personal Norms	19.34 (4.34)	22.26 (2.13)		<b>.49</b>	<b>.25</b>	<b>.39</b>	<b>.43</b>
2. Perceived Peer Norms	15.13 (4.71)	15.17 (3.87)	<b>.18</b>		<b>.46</b>	<b>.42</b>	<b>.39</b>
3. BPBQ - Bully	.38 (.62)	.32 (.36)	<b>.23</b>	.10		<b>.72</b>	<b>.67</b>
4. Cyberbullying	.24 (.71)	.11 (.21)	<b>.25</b>	-.07	<b>.49</b>		<b>.76</b>
5. Sexual Harassment	.38 (.89)	.12 (.28)	<b>.36</b>	<b>.21</b>	<b>.40</b>	<b>.43</b>	

*Note.* Means and standard deviations are presented using untransformed values; correlations used the transformed data. The range of values is 0 – 24 for Personal Norms and Perceived Peer Norms, 0 – 4 for BPBQ – Bully, and 0 - 6 for Cyberbullying and Sexual Harassment. For all results, higher values of Personal Norms and Perceived Peer Norms indicate more prosocial attitudes. For the correlations, higher scores on BPBQ - Bully, Sexual Harassment, and Cyber Aggression indicate lower levels of those variables. Correlations appear above the diagonal for males and below the diagonal for females. Bold correlations are significant at  $p < .05$ .

**Table 3***Unstandardized and Standardized Path Coefficients, Standard Errors, p values, and  $\chi^2$  Difference Analyses*

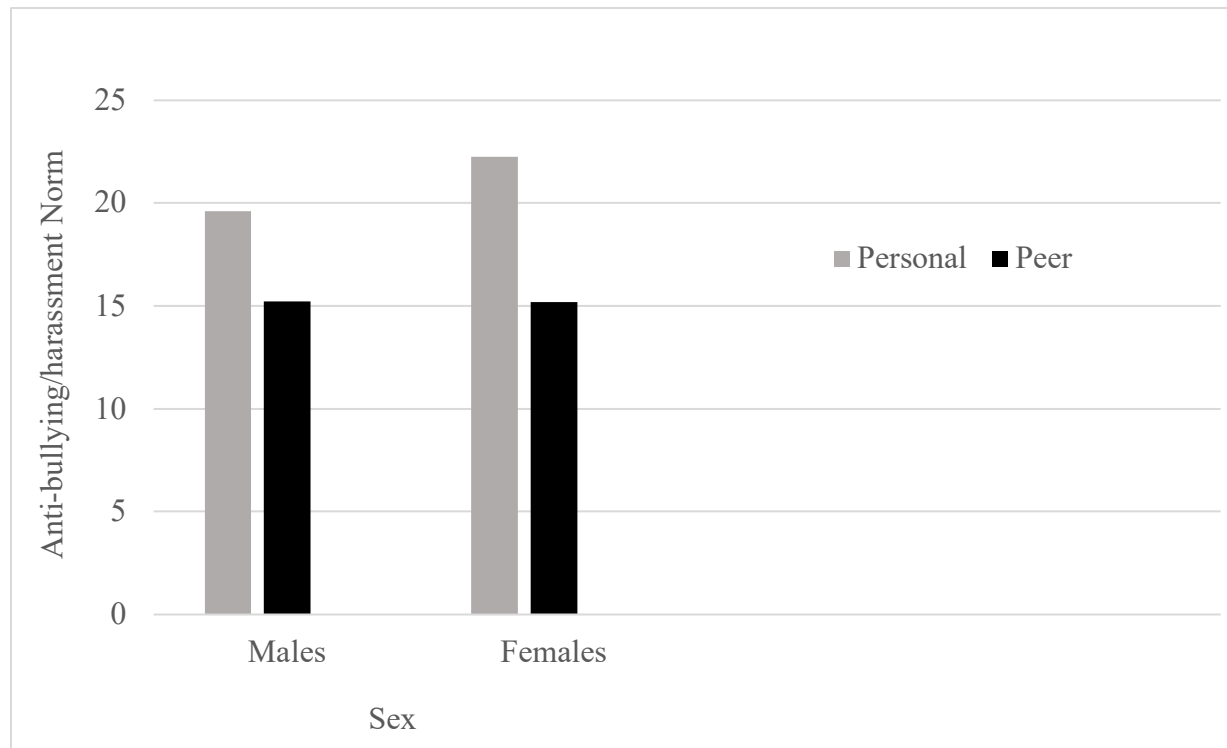
Variable		Total Sample				Males				Females				$\chi^2$ diff	$p$ $\chi^2$ diff
		<i>b</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>B</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>B</i>	<i>SE</i>	<i>p</i>		
Bullying															
	Personal Norms	<b>-.045</b>	<b>-.398</b>	<b>.120</b>	<b>.010</b>	-.044	-.284	.176	.107	<b>-.037</b>	<b>-.224</b>	<b>.091</b>	<b>.014</b>	7.417	<.001
	Perceived Peer Norms	-.018	-.156	.083	.061	<b>-.037</b>	<b>-.281</b>	<b>.123</b>	<b>.022</b>	.001	.012	.116	.915	.31	.578
Cyberbullying															
	Personal Norms	<b>-.068</b>	<b>-.465</b>	<b>.124</b>	<b>&lt;.001</b>	<b>-.085</b>	<b>-.475</b>	<b>.173</b>	<b>.006</b>	<b>-.023</b>	<b>-.229</b>	<b>.090</b>	<b>.011</b>	16.39	<.001
	Perceived Peer Norms	-.014	-.123	.078	.114	-.031	-.210	.109	.055	.007	.136	.081	.092	10.75	<.001
Sexual Harassment															
	Personal Norms	<b>-.638</b>	<b>-.482</b>	<b>.101</b>	<b>&lt;.001</b>	<b>-.742</b>	<b>-.468</b>	<b>.147</b>	<b>.001</b>	<b>-.294</b>	<b>-.318</b>	<b>.090</b>	<b>&lt;.001</b>	1.225	.268
	Perceived Peer Norms	<b>-.163</b>	<b>-.158</b>	<b>.068</b>	<b>.021</b>	-.235	-.178	.112	.111	-.071	-.139	.073	.056	10.45	.001
														<u>Overall Model</u>	
														7.417	.006

*Note.* Paths that are statistically significant at  $p < .05$  are bolded. The Total Sample column aligns with Research Question 2 and other columns with Research Question 3. Values in  $\chi^2$  diff column represent the change in  $\chi^2$  from when that path was constrained and unconstrained. Values in the  $p \chi^2$  diff column represent the  $p$  value of the  $\chi^2$  difference test. If this value is  $< .05$ , there is a significant difference between the strength of that path for males and females.

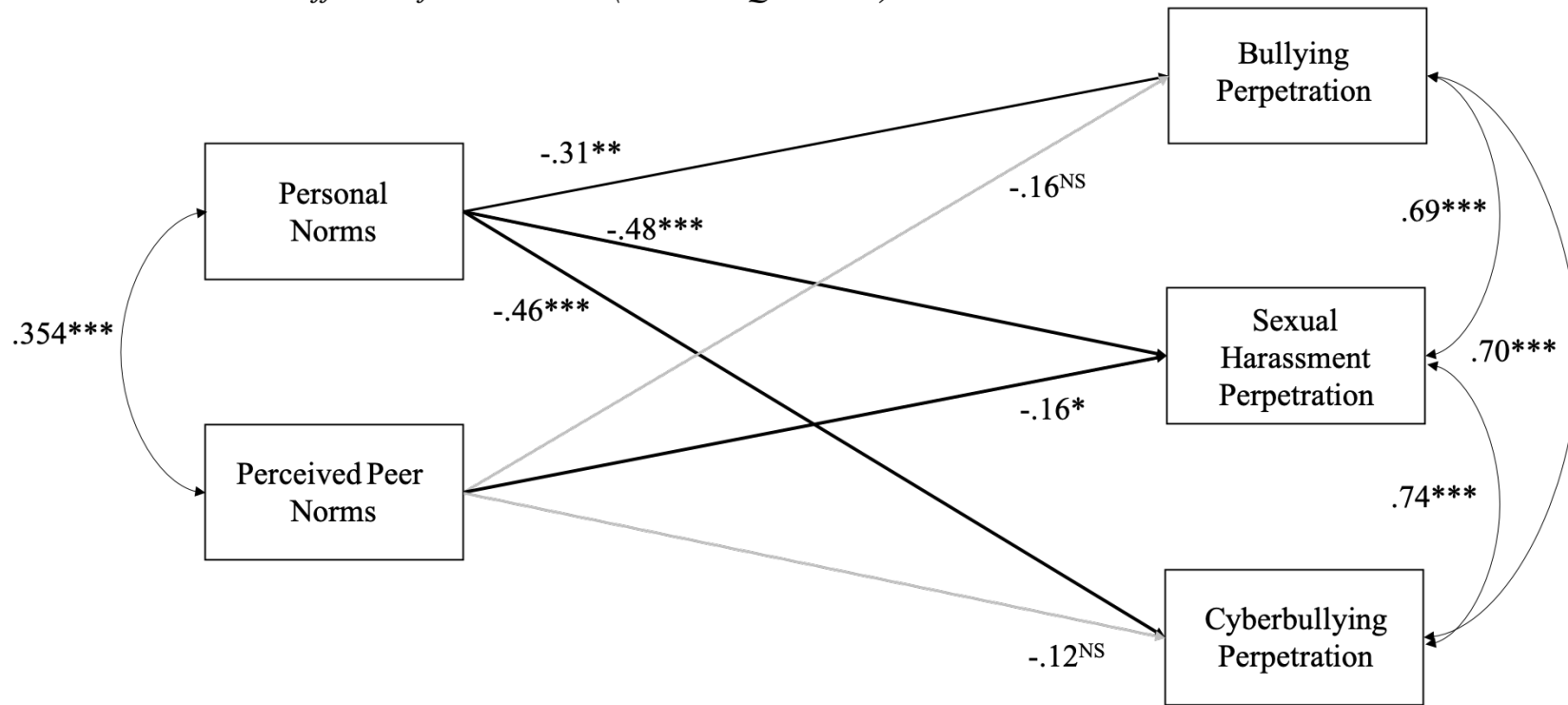
**Figure 1***Conceptual Model*

**Figure 2**

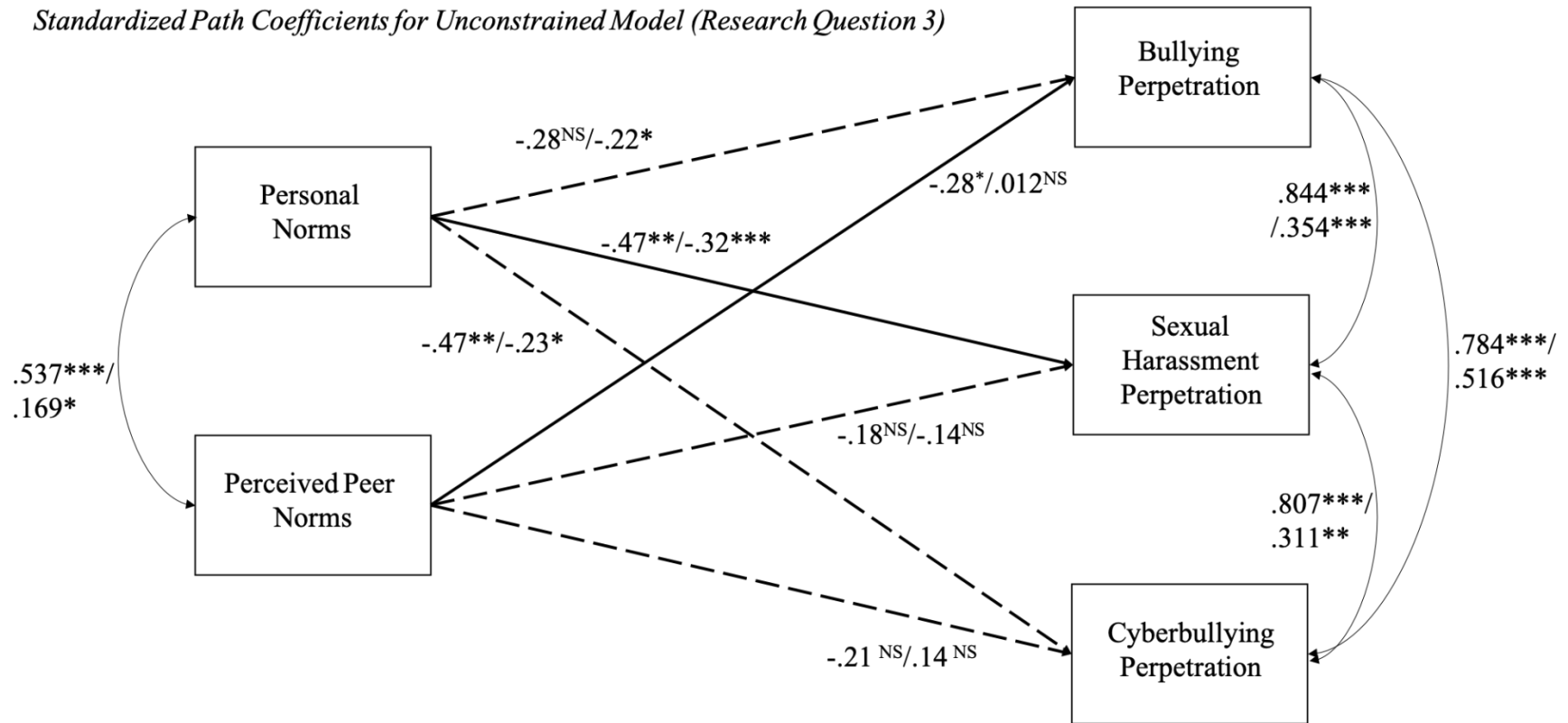
*Students' Perceptions of Anti-bullying/harassment Norms as a Function of Gender and Norm Type*



*Note.* Possible range of scores is 0 – 24.

**Figure 3***Standardized Path Coefficients for Full Model (Research Question 2)*

Note:  $*** = p < .001$ ;  $** = p < .01$ ;  $* = p < .05$ ;  $^{NS} = p > .05$ ; gray lines indicate non-significant paths.

**Figure 4***Standardized Path Coefficients for Unconstrained Model (Research Question 3)*

*Note:* Standardized estimates for males are presented first; A dashed line indicates that there was a significant difference between males and females based on the chi-square difference test; NS = Not significant or  $p > .05$ ; \*\*\* =  $p < .001$ ; \*\* =  $p < .01$ ; \* =  $p < .05$ .