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## The Effects of Sexual Violence Victimization on Perceived Peer Norms and Social Barriers to Bystander Intervention Among High School Students

Mazheruddin M. Mulla<sup>1</sup>, Katherine W. Bogen<sup>2</sup>, Gabriela Lopez<sup>3</sup>, Michelle Haikalis<sup>3</sup>, Richard J. Meza Lopez<sup>4</sup>, Lindsay M. Orchowski<sup>1</sup>

<sup>1</sup>Alpert Medical School of Brown University, Providence, RI, USA

<sup>2</sup>University of Nebraska-Lincoln, USA

<sup>3</sup>Brown University School of Public Health, Providence, RI, USA

<sup>4</sup>Rhode Island Hospital, Providence, USA

### Abstract

The experience of sexual victimization may lead to increased threat-biased information processing, including increased perceptions of peer attitudes that condone sexual violence. The perception that peers generally condone sexual violence may in turn inhibit survivors of sexual violence from intervening to address risk for harm among their peers. To assess this possibility, the present study examined the direct and indirect association between sexual victimization by a romantic partner, perceived peer rape myth acceptance (RMA), perceived social barriers to bystander intervention, and bystander behaviors over 2-month follow-up in a sample of 843 high school students. Multiple regression path analyses revealed a sequence of positive associations between sexual victimization, perceived peer RMA, and perceived social barriers to bystander intervention, respectively. These direct associations to be significant among girls, but not boys, and revealed an additional negative direct association between perceived social barriers to bystander intervention and bystander behavior over 2-month follow-up among girls. Furthermore, sexual victimization was indirectly associated with decreased bystander behaviors among girls through perceived peer RMA and perceived social barriers to bystander intervention, respectively. Taken together, the current findings highlight the importance of addressing misperceptions of peer norms among survivors of sexual violence in bystander intervention programs.

### Keywords

sexual violence; social norms; bystander behavior

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Sexual violence is a pressing public health concern, with approximately 11.3% of high school girls and 3.5% of high school boys in the U.S. experiencing forced sex (CDC, 2017).

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**Corresponding Author:** Mazheruddin M. Mulla, Department of Psychiatry and Human Behavior, Alpert Medical School of Brown University, 146 West River Street, Suite 11B, Providence, RI 02904, USA. MohamedMulla87@gmail.com.

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The prevalence of other forms of sexual violence is even higher. Research examining 1,086 7th through 12th grade students found that 26% of boys and 51% of girls experienced some form of peer-perpetrated sexual aggression before the end of high school (Young et al., 2009). Rates of sexual harassment are particularly high among youth. In a nationally representative sample of 2,064 8th through 11th grade students, 83% of girls and 79% of boys reported experiences of sexual harassment, with 59% of victims experiencing harassment “often” (Lipson, 2001). Most experiences of sexual victimization among adolescents are perpetrated by an acquaintance of the victim (Rennison, 2002), often a dating or romantic partner (Ageton, 1983; Smalls & Kerns, 1993; Young et al., 2009). Sexual victimization is associated with myriad negative health outcomes, including binge drinking, early substance use debut, unprotected sex, marijuana use, involvement in fighting, depression (Champion et al., 2004), poor perception of general health (Thompson et al., 2002), post-traumatic stress disorder (PTSD), maladaptive coping (Yuan et al., 2006), anxiety (Choudhary et al., 2012), sexual dysfunction (Turchik & Hassija, 2014), and PTSD (Kessler et al., 1995).

Bystander intervention training programs engage community members in violence prevention by raising awareness, addressing problematic perceptions and attitudes, and encouraging action (Banyard, 2015). The general utility of bystander intervention programs in addressing violence-related attitudes and behaviors among young adults is supported by numerous studies, the majority of which focus on college students (for reviews see DeGue et al., 2014; Jouriles et al., 2019). Far fewer studies examine bystander intervention among high school youth (Edwards et al., 2015, 2019; Jouriles et al., 2016, 2019; Mennicke et al., 2021). Given that models of bystander intervention developed for application among college students may not generalize to younger populations, research is needed to elucidate the individual and contextual factors that influence high school students’ likelihood of intervening against sexual violence. Accordingly, the present study advances the literature by utilizing a prospective design to examine the intersections between personal experiences of sexual victimization, perceived peer norms, and perceived barriers to bystander intervention and bystander behavior among a sample of 10th-grade high school students in the United States. In the literature review below, we review the theoretical and empirical support for the constructs explored in this research and describe the conceptual model tested in this study.

## Sexual Victimization and Bystander Behavior

Research addressing the ways in which personal experiences of sexual victimization may affect individuals’ perceptions and behaviors related to bystander intervention is relatively limited, with few studies focused on high school students. However, previous theory and research provide some support for the conceptual link between victimization and prosocial bystander behavior. For instance, theories of prosocial behavior that conceptualize personal suffering as a motivation for altruism suggest that individuals who experience hardship are more likely to show compassion toward others and help others who also experience harm (Lim & DeSteno, 2016; Vollhardt, 2009). In fact, existing studies indicate that individuals with a personal history of victimization are more likely to intervene in situations of dating or sexual violence (Banyard et al., 2020; Edgington et al., 2019; Woods et al., 2016).

For example, a study of 240 undergraduate women conducted by Edgington et al. (2019) found that women who had personally experienced victimization reported higher bystander intentions to intervene against physical or sexual assault. More recent work by Banyard et al. (2020) likewise found that high school students who experienced more victimization in the previous 2 months also reported engaging in more prosocial bystander behaviors during that time period, relative to those who had experienced less victimization.

## The Role of Perceived Peer Norms in Bystander Intervention

Whereas the findings described above support the general association between personal victimization experiences and bystander behavior, other work suggests that students' likelihood of engaging in bystander actions is bound by social context (Banyard et al., 2020; Mabry & Turner, 2016). There is evidence that students' perceptions of injunctive norms, or peer attitudes regarding the acceptability of violence, significantly impact on willingness to intervene to address risk for violence (Brown & Messman-Moore, 2010; Deitch-Stackhouse et al., 2015). Brown and Messman-Moore (2010) found that men who perceived their peers to be more accepting of violence were less willing to intervene in a potentially sexually violent situation regardless of their personal feelings toward sexual violence. Fabiano et al. (2003) found that men's perceptions of other men's willingness to intervene in bystander situations were the strongest predictors of their personal willingness to intervene. Likewise, studies examining students' perceptions of their peers' endorsement of rape myths (i.e., beliefs that condone sexual violence and blame victims; Payne et al., 1999) and other rape-supportive attitudes suggest that peer perceptions are highly predictive of students' personal likelihood of engaging in bystander (Deitch-Stackhouse et al., 2015).

## Effects of Sexual Victimization on Perceptions of Peer Norms

The research described above outlines the ways in which both personal experiences of sexual victimization and perceived peer norms regarding the acceptability of sexual violence may each affect individuals' likelihood of engaging in bystander intervention. However, the association *between* sexual victimization and perceived peer norms regarding sexual violence remains largely overlooked in current conceptual models of bystander behavior. Understanding the ways in which students' perceptions of peer norms related to sexual violence are influenced by their personal experiences of victimization is vital to elucidating and addressing barriers to bystander intervention among important subgroups of individuals. Accordingly, the present study sought to integrate and examine the association between victimization history and perceived peer norms within a broader model of the direct associations between these variables and bystander behaviors observed in previous research.

The potential influence of victimization on perceptions of peer norms is conceptually supported by research showing the experience of sexual violence to be associated with negative alterations in social cognition, including exaggerated negative beliefs about others (e.g., "most people have bad intentions"), and heightened activation of threat detection processes (Campbell et al., 2009; Chapman et al., 2012; Lanius et al., 2017; Müller et al., 2018). These changes may in turn manifest in hypervigilance and increased sensitivity toward social cues, such as peers' expressions of violence-condoning attitudes, leading

victims to develop higher perceptions of the prevalence of those attitudes among their peers. This possibility is consistent with the findings of previous work by Paul et al. (2009), which showed that college students who had experienced sexual assault overestimated their peers' acceptance of rape myths-stereotyped or false beliefs that blame victims and excuse perpetrators (Payne et al., 1999).

### **Association Between Perceived Norms and Social Barriers to Intervention**

In many cases, increased perceptions of peer approval or support for sexual violence among victims may also be accompanied by increased concerns of peer disapproval or criticism toward intervening against it. Research examining factors that inhibit and facilitate prosocial bystander behaviors suggests that anticipated negative reactions from peers are a prominent social barrier to intervention (Hoxmeier et al., 2015). Casey et al. (2017) found that fear of being judged negatively by peers and socially excluded was a common barrier to bystander intervention among high school students. Qualitative examinations of young adult and adolescent populations suggest that evaluation apprehension concerns of looking weak to male peers (Carlson, 2008) and fears of negative social repercussions (Edwards et al., 2015) are among the most common reasons given for not engaging in bystander intervention. These perceived social barriers may be especially salient for victims of sexual violence and compound concerns related to elevated perceptions that many of their peers accept or condone the violence they experienced.

### **The Current Investigation**

In sum, research suggests two potential pathways through which the experience of sexual victimization may affect individuals' likelihood of engaging in prosocial bystander behaviors: (a) by increasing perceptions of peer norms regarding the acceptability of violence (i.e., peer rape myth acceptance [RMA]), and in turn, (b) by increasing perceptions of social barriers (i.e., negative social consequences) to bystander intervention. To date, most of the research documenting the role of sexual victimization, perceived peer norms, and perceived social barriers in bystander intervention focuses on each of these constructs separately. Further, no research directly examines the ways in which these constructs collectively or sequentially influence individuals' likelihood of engaging in prosocial bystander behaviors. Moreover, as much of the research on predictors of bystander intervention relies on cross-sectional designs; longitudinal research is needed to reliably establish the prospective influence of putative correlates of bystander intervention. Lastly, studies addressing the facilitatory and inhibitory effects of sexual victimization and perceived peer norms on bystander behaviors focus largely on college populations (DeGue et al., 2014; Jouriles et al., 2019). Further work is needed to determine whether factors that influence bystander behaviors among young adults operate similarly in the developmental context of adolescence.

The present investigation sought to address the limitations described above and extend the current literature on bystander intervention in three ways: (a) by integrating and testing the direct and indirect associations among sexual victimization by a romantic partner, perceived peer RMA, perceived social barriers, and prosocial bystander behaviors within a novel

conceptual model; (b) employing a longitudinal dependent measure assessing participants' engagement in prosocial bystander behavior over a 2-month follow-up period, and (c) by utilizing a large sample of high school students. Based on previous research regarding the associations between victimization, perceived peer RMA, and social barriers to bystander intervention among college students, the following hypotheses were formulated:

1. Sexual victimization will be associated with higher perceived peer RMA.
2. Higher perceived peer RMA will be associated with higher perceived social barriers to intervening.
3. Higher perceptions of peer RMA and social barriers to intervening will be associated with lower rates of bystander behaviors over 2-month follow-up.
4. Sexual victimization will be indirectly associated with lower rates of bystander behavior over the 2-month follow-up through perceived peer RMA and social barriers to bystander intervention.

## Methods

### Procedures

The study was approved by the local Institutional Review Board and Department of Education. The current study included baseline and 2-month follow-up data collected from 10th grade students across 27 high schools in the Northeast United States. Data were collected as part of a larger study of a school-based sexual assault prevention program. Permission to conduct the school-based study was granted by the school Superintendent, School Board, or Head of School. A baseline survey was administered early in the fall semester. A second survey was administered 2 months later. To avoid potential confounding effects of prevention programming implemented during the follow-up period as part of the larger program evaluation, participants in the intervention group were excluded from the current study.

Informed consent was obtained from parents via an opt-out procedure, where parents had an opportunity to opt their child out of the research study. All participants provided adolescent assent. Students whose parents opted them out of the research, or who did not provide adolescent assent, were provided with alternative activities to complete during survey administration. The survey was administered on a pencil and paper questionnaire, or via a laptop computer, depending upon the resources available at the school. The survey was administered in health classes or other periods of the school day chosen by the school. Students were informed that the survey was anonymous and that they could skip any questions that they did not want to answer. The surveys were administered by trained research assistants. Students created a self-generated code so that they surveys could be matched over time without having any links to the student identity. Students received a \$10 gift card for completing the survey. Students completed the surveys in roughly 45 to 60 minutes.

## Participants

All participants in the study were 10th-grade high school students ( $M_{age} = 15.37$ ,  $SD = 0.63$ ). Because the number of participants who identified as transgender (1%) or did not provide data on their gender identity (2.1%) were not adequate for inclusion as separate groups in the gender-specific models tested in the current study, these individuals were excluded from analyses. Additionally, students who had not been in a dating relationship within the past year were precluded from providing data on measures of sexual violence victimization by a romantic partner and were therefore also excluded from analyses. The final analytic sample included 843 participants (42.5% boys and 57.4% girls). With the intention of protecting the anonymity of student survey responses in smaller schools that enrolled in the research, state regulatory agencies prohibited the collection of information on participants' race and ethnicity in the context of the research. Sample sizes of participants who provided data on each variable are presented by gender in Table 1. Methods for handling missing data on study variables are described in the data analysis section below.

## Measures

**Sexual violence victimization by a romantic partner at baseline.**—Participants' experiences of sexual victimization by a romantic partner over the previous year were assessed using the 4-item Sexual Abuse subscale of the Conflict in Adolescent Dating Relationship Inventory (CADRI; Wolfe et al., 2001). Each item asked participants to indicate how often in the past year a romantic partner had engaged in different forms of sexual abuse (e.g., threatened them to coerce them into having sex) toward them the following scale: 0 (“Never”), 1 (“Seldom; 1–2 times”), 2 (“Sometimes; 3–5 times”), or 3 (“Often; 6 or more times”). Participants' responses to each item were summed and then dummy coded (0 = *no victimization*, 1 = *at least 1 instance of victimization*) in accordance with established procedures for including dichotomous variables in a univariate regression model (Cohen et al., 2013). Participants who indicated they had not been in a romantic relationship within the previous year were exempt from completing these measures and were not included in the final sample that was analyzed.

**Perceived peer RMA at baseline.**—Participants' perceptions of peer RMA were assessed using 7 items adapted from an abbreviated version of the Illinois Rape Myth Acceptance Scale (Cook-Craig et al., 2014). Each adapted item asked participants to indicate how much they agreed with different statements about sex and dating among students at their school (e.g., “Students at my school think that if a guy spends money on a date, the girl should have sex with him . . .”) on a scale of 0 (*strongly disagree*) to 3 (*strongly agree*). Items demonstrated strong internal reliability in the current sample (Cronbach's  $\alpha = .99$ ) and were averaged to create a RMA score.

**Perceived social barriers to bystander intervention (SB) at baseline.**—Perceptions of social barriers to bystander intervention were assessed using a subset of face-valid items selected from the Pros and Cons of Bystander Behavior Scale (PCBAS; Edwards et al., 2018). Each item asked participants to indicate how much they believed they would receive a particular negative social reaction from peers if they intervened against sexual violence (e.g., “Helping to prevent dating or sexual violence could make people mad

at me”) on a scale of 0 (*very unlikely*) to 4 (*very likely*). The initial item pool (items 3, 4, 5, 6, 7, and 10) was tested and refined using confirmatory factor analyses conducted in Mplus (Muthén & Muthén, 2017). Model fit statistics and standardized parameter estimates for each item in the original and revised item sets are presented in Table 2. The final set of 5 items demonstrated good internal reliability in the current sample (Cronbach’s  $\alpha = .82$ ) and were averaged together to create a perceived social barriers score.

**Bystander behaviors over the 2-month follow-up.**—Participants’ engagement in prosocial bystander behaviors at 2-month follow-up (T2B) was assessed using 7 items drawn from previous work by Cook-Craig et al. (2014). Each item asked participants to indicate how often in the past 6 months they had taken action to intervene against different forms of sexual violence/relationship abuse, or help the victim (e.g., “. . . get help for a friend because they had been forced to have sex or were physically hurt by a boyfriend/girlfriend?”). Participants responded on a 6-point Likert-type scale that was scored as follows: NA (“I didn’t have the chance to do this in the past 6 months”), 0 (“I could have done this but didn’t”), 1 (“1–2 times”), 2 (“3–5 times”), 3 (“6–9 times”), and 4 (“10+ times”). Items for which participants reported having no opportunity to intervene (NA) were treated as missing data, and items for which participants responded 0 to 4 were summed to create total scores for bystander intervention over the 2-month follow-up (T2B).

## Data Analysis

Preliminary psychometric analyses were conducted to confirm the validity of items included in the measure of social bystander barriers constructed for the purposes of this study (see Table 4). Descriptive statistics and bivariate correlations were examined to ensure the distribution and associations of study variables met conditions for further modeling. Full information maximum likelihood estimation (FIML) was used in all subsequent analyses to account for missing data.

Hypothesized direct and indirect associations between study variables were then assessed using a series of multiple regression analyses conducted in Mplus (Muthén & Muthén, 2017). Hypothesized associations were tested in fully saturated structural models, in which all possible parameters were tested, leaving zero degrees of freedom and resulting in perfect model fit. Thus, goodness of fit statistics were not evaluated as criterion for the validity of model results (Kline, 2011). Baseline measures of sexual violence victimization, perceived peer RMA, and social barriers to bystander behavior were entered as sequential predictors of bystander behavior at 2-month follow-up in a saturated multiple mediation path model, with school entered as a cluster-level variable to account for nonindependence of observations. The model was first tested in the overall sample with gender entered as a covariate, and then retested using a multiple-group framework in which all path coefficients were estimated simultaneously for boys and girls separately.

All models were estimated using maximum likelihood with robust standard errors (MLR). MLR provides an alternative method for potential heteroskedasticity and non-normality of data and produces parameter estimates and standard errors identical to those obtained in bootstrapping in simulation studies (Muthén & Muthén, 2017). Bias-corrected 95%

confidence intervals were used as a criterion for identifying significant parameters among the terms of the models (Williams & MacKinnon, 2008). Fit indices were not evaluated or reported since all models were fully saturated (Kline, 2011). Standardized path coefficients (see Figure 1) were used as proxy indices of effect sizes to assess the magnitude of associations between study variables (Nieminen et al., 2013). In conjunction, the approach of testing fully saturated models that precluded issues of model fit, the use of MLR to account for potentially non-normally distributed data on study variables, and the use of FIML to account for missing data ensured that all basic assumptions for multiple regression analysis of structural models were met.

## Results

### Descriptive statistics

Frequency analyses indicated the prevalence of sexual victimization in the prior year was higher among girls (21.4%) than boys (6.2%) in the present sample, consistent with figures reported in other studies. Means, standard deviations, and bivariate correlations of the study variables are presented in Table 3. Basic associations among the study variables were generally consistent with predictions. Furthermore, the significant positive correlation of gender with sexual victimization, perceived peer RMA, and bystander behavior over the 2-month follow-up provided rationale for examining gender differences in subsequent analyses of the hypothesized model.

### Overall Model

Standardized coefficients for significant direct paths in the overall model are presented in Figure 1, and unstandardized coefficients and standard errors for direct and indirect paths in the model are reported in Table 4. As shown in Figure 1, the predicted positive association between sexual victimization and perceived peer RMA was significant; participants who reported experiencing sexual victimization in the previous year estimated RMA among peers to be significantly higher than those who had not experienced victimization. Higher perceived peer RMA was also associated with significantly higher perceived social barriers to bystander intervention; participants who estimated RMA to be higher among peers were also more concerned that others would react negatively if they intervened to stop the perpetration of sexual violence against another student. However, the hypothesized direct effects of sexual victimization and perceived barriers to bystander intervention on bystander behavior over the 2-month follow-up were nonsignificant, and there was an unanticipated significant positive association between perceived peer RMA and bystander behavior over the follow-up. Tests of indirect effects indicated that the influence of sexual victimization on perceptions of social barriers to bystander intervention was fully mediated through increases in perceptions of peer RMA. However, no other predicted indirect effects in the overall model were significant.

### Gender-Specific Models

Gender differences in hypothesized associations among constructs were examined using a multiple-group framework in which the hypothesized model was estimated for boys and girls separately. Standardized coefficients for significant direct paths in each model are



presented in Figure 2, and unstandardized coefficients and standard errors for direct and indirect paths in the models are reported in Table 4.

Results of the model for boys were even less congruent with hypotheses than those of the overall model; only the predicted positive association between perceived peer RMA and perceived social barriers to bystander intervention reached significance. No other hypothesized associations in the model were significant among men. On the other hand, the pattern of significant associations observed for girls supported several key hypotheses. All of the significant direct paths in the overall model were replicated for the model of girls only. Specifically, girls who reported experiencing sexual victimization in the previous year perceived RMA to be significantly higher among their peers, relative to those who had not been victimized. Furthermore, increased perceptions of peer RMA among girls were directly associated with increased perceptions of social barriers to bystander intervention, as well as increased bystander behavior at 2-month follow-up. Additionally, there was a significant negative direct effect of perceived social barriers on bystander behavior at 2-month follow-up; girls who were more concerned about facing negative social reactions for intervening against sexual violence at baseline were less likely to engage in bystander behavior over the following 2-month period.

Tests of indirect effects also revealed that, as in the overall sample, the positive association between sexual victimization and perceived social barriers to bystander intervention among girls was fully mediated through increases in perceptions of peer RMA. Furthermore, there was a significant negative indirect effect of sexual victimization on Time 2 bystander behavior through perceived peer RMA and perceived social barriers to bystander intervention respectively. Girl participants who experienced sexual violence victimization within the previous year perceived RMA to be higher among peers, and in turn, perceived more social barriers to bystander intervention, which predicted less self-reported engagement in actual bystander behavior over the following 2 months.

## Discussion

The primary objective of the present study was to examine the indirect effects of sexual victimization on bystander behavior via perceived social norms (i.e., perceived peer RMA and perceived social barriers to intervention). Although some research suggests that college students with a history of dating violence and sexual assault victimization endorse more frequent bystander behavior (Woods et al., 2016) and higher intentions to intervene (Edgington et al., 2019), empirical examination of bystander behavior among those with personal histories of sexual victimization is still relatively sparse and with notable exceptions (Banyard et al., 2020) focuses almost exclusively on young adults. This study advances the literature by examining a potential mechanism for how sexual victimization may relate to bystander behavior and doing so in an adolescent population. Results among girls largely support the hypothesized indirect effects. Overall, results point to the importance of perceptions of social norms to explain the relationship between sexual victimization and bystander intervention behavior.

### Indirect Effect of Sexual Victimization on Perceived Social Barriers to Intervening

In models using the full sample and data from girls only, a personal history of sexual victimization related to greater perceived peer RMA, which in turn related to more perceived social barriers to intervention. This finding points to a unique mechanism by which those who experience sexual victimization may experience more barriers to intervening to prevent sexual violence. Sexual victimization in the previous year by a romantic partner provides high school girls with direct evidence that a peer (i.e., romantic partner) would perpetrate violence and likely holds attitudes consistent with RMA.

### Indirect Effects of Sexual Victimization on Bystander Intervention Behavior

Although there was not a direct association between sexual violence victimization and subsequent bystander behavior, analysis of our proposed path model identified two indirect paths by which sexual victimization relates to bystander intervention behavior among high school students. First, results indicate that sexual victimization may influence bystander behavior indirectly through perceptions about peers' RMA. In the full sample, results supported the possibility that past year sexual victimization related to an increased perception that peers were accepting of rape myth, which, in turn, related to *more* engagement in bystander intervention behavior. This finding is consistent with prior research indicating that woman with a personal history of intimate partner or sexual victimization report more intent to intervene in response to a sexual assault vignette than those with no history of victimization (Edgington et al., 2019). In analysis with only high school girls, a second indirect path emerged via both perceived peer RMA and perceived social barriers to intervening. Girls who reported sexual victimization similarly endorsed higher perceived peer RMA, but that perception related to more perceived social barriers to intervening, which, in turn, related to *less* subsequent bystander behavior.

This pattern of results points to opposing functions of perceived peer RMA. That is, as perceived peer RMA increases, individuals may perceive more social barriers to intervention and therefore be less likely to intervene. This relationship is consistent with prior studies documenting an association between higher perceived peer RMA and lower likelihood of intervening as a bystander (Deitch-Stackhouse et al., 2015). However, when controlling for perceived social barriers, stronger endorsement that peers are accepting of RMA may lead to more bystander intervention behavior. Although not directly assessed in this study, individuals who endorse greater perceived peer RMA may be more likely to notice risk factors for sexual violence, which is a necessary precursor to bystander intervention.

### Gender Differences

Given significant gender differences revealed in post hoc analysis, the hypothesized path model was run separately for girls and boys. Results indicate that several of the hypothesized effects were found in the model with girls but not boys. Although not an original part of the planned hypotheses, the present results are consistent with previous research showing that women are more likely to engage in bystander behavior than men (McMahon & Banyard, 2012) and that men are more likely to report perceived situational barriers to bystander intervention (Burn, 2009).

## Limitations and Future Directions

Several methodological shortcomings of the current study bear important considerations for the interpretation of its results. First, the measure of RMA used in the present study focuses on attitudes regarding sexual violence perpetrated against girls and women. As such, it is understandable that boys' personal experiences of sexual victimization by a romantic partner may not impact their perceptions of male peers' attitudes regarding the sexual victimization of girls. Second, only 24 boys in the current sample endorsed sexual victimization by a romantic partner in the previous year. Failure to reject the null hypothesis should never be interpreted as definitive evidence that an effect is not present, and this point is especially relevant considering the small number of boys reporting past year sexual victimization by a romantic partner. A larger sample or one with more boys endorsing sexual victimization would provide more power to detect effects of interest.

Whereas a strength of the present work is the inclusion of two time points to assess the influence of sexual victimization and peer perceptions on subsequent bystander intervention behavior. However, this could be further improved by future research utilizing more intensive longitudinal data collection and analysis to assess within-person changes over time in our outcomes of interest following sexual victimization. Another notable limitation of the present work is that it focused exclusively on sexual victimization in the context of romantic relationships. The Sexual Abuse subscale of the CADRI (Wolfe et al., 2001) used to assess participants' histories of sexual victimization only asked about their experiences of sexual abuse by a romantic partner. Although this approach is consistent with research showing most of the sexual victimization among adolescents to be perpetrated by romantic partners or other acquaintances (Jackson et al., 2000; Rennison, 2002), it nevertheless overlooks the potential impacts of sexual victimization by individuals with no romantic connection to the victim. Furthermore, the timeframe within which sexual victimization was assessed was limited to the previous year. Although this choice allows the analyses to center on the influence of proximal experiences of sexual victimization on perceptions of peer norms, many of the participants in our sample may have experienced sexual victimization prior to the previous year and/or experienced multiple victimizations. Further work using more thorough assessment methods may help to clarify the differential and additive ways specific forms of victimization and their frequencies may impact perceptions of peer norms and other social-cognitive processes that influence bystander behavior.

Finally, data on participants' race, ethnicity, socioeconomic status, and other potentially relevant demographic factors was not available. However, publicly available data suggests that approximately 31% of students in the schools included in this research identified as a racial and/or ethnic minority. Future studies incorporating information about race, ethnicity, or other demographic variables could help to establish the generalizability of associations observed in the current sample and identify potential individual-level moderators. Future work should also examine if changes in perceived social norms about RMA and social barriers to intervention may be a mechanism by which bystander intervention training results in more prosocial bystander behavior.

## Clinical and Policy Implications

The present work points to the important role of perceived peer attitudes in bystanders' likelihood of intervening. Studies support implementing a social norms approach to the prevention of sexual aggression among college men (Gidycz et al., 2011). Applying principles of a social norms approach may help to facilitate change within bystander intervention training programs as well.

Specifically, given that survivors of sexual victimization have directly experienced the problematic behavior of their peers (i.e., the experience of a romantic partner who has perpetrated sexual aggression), it may be particularly useful for bystander prevention programming to address perceptions of peer acceptance of RMA that may act as social barriers to bystander intervention. Broadly, bystander intervention programs for youth may benefit from robust discussion of psychological barriers to intervention, including discussion of perceived peer RMA. At the policy level, efforts to ensure the implementation of sexual assault prevention efforts in schools should ensure that initiatives consider the ways in which survivors of sexual violence may respond differently to programming efforts. Bystander intervention programs may also benefit from acknowledging that there are survivors in the room, whose approach to intervening is likely to be influenced by experiences of trauma.

The findings of the current study are also relevant to clinical professionals (e.g., therapists, social workers) working with adolescent's who experience sexual victimization. Youth with a history of sexual victimization by a romantic partner may be at risk for greater perceptions of peer RMA and may benefit from corrective feedback which unearths the true positive norms among youth. Bystander intervention can also be considered a form of social activism and may provide an opportunity for youth who experience sexual victimization to foster empowerment and posttraumatic growth. Toward this end, it may be helpful for clinicians working with youth who have experienced sexual victimization to discuss ways in which the experience influence how they respond to their peers as well as opportunities to intervene.

## Conclusion

In sum, the study sought to advance the extant literature on bystander intervention in three ways: (a) by incorporating the basic associations between sexual victimization, perceived peer norms, perceived social barriers to intervening, and bystander behavior observed in previous research within a mediational framework; (b) by using longitudinal methods to assess the prospective associations between predictor variables and bystander behavior over a 2-month follow-up period, and; (c) by utilizing a large sample of high school students. Tenth grade students participating in a school-based sexual violence prevention program were surveyed at baseline and 2-month follow-up. Direct and indirect associations between sexual victimization, perceptions of peer RMA, perceived social barriers to bystander intervention, and bystander intervention at 2-month follow-up were examined.

Results of the present study provide novel insight into the ways in which the experience of sexual victimization may lead to increased perceptions of peer norms regarding the acceptability of sexual violence. Additionally, analyses of the hypothesized mediation models elucidated the potential for sexual victimization to indirectly influence adolescents'

likelihood of engaging in prosocial bystander intervention through increases in perceptions of peer RMA and social barriers to bystander intervention. Whereas this predicted series of associations was highly corroborated by results of the model including only girls, it was only partially supported by the full-sample model and minimally supported by the model including only boys. These findings highlight the interactive influences of background victimization experiences and social perceptions on bystander intervention against sexual violence among girls and bear important implications for the development of bystander prevention programs.

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## Author Biographies

**Mazheruddin M. Mulla**, PhD, MPH, is a Clinical Psychology Postdoctoral Fellow within the Department of Psychiatry and Human Behavior at the Alpert Medical School of Brown University. His research focuses on the application of social cognitive models to prevent intimate partner violence and other health risk behaviors.

**Katherine W. Bogen**, BA, is a Clinical Program Coordinator at Rhode Island Hospital, within the Department of Psychiatry.

**Gabriela López**, MS, is a doctoral candidate in clinical psychology at the University of New Mexico. Her research focuses on the intersection of alcohol use and sexual victimization among sexual and racial/ethnic minority women.

**Michelle Haikalis**, PhD, is an NIAAA T32 postdoctoral research fellow at the Brown University Center for Alcohol and Addiction Studies. Her research is focused on the intersection of alcohol and sexual violence among adolescents and adults. Her work is also focused on the development and evaluation of prevention strategies, including bystander intervention.

**Richard J. Meza Lopez**, BS, is a clinical research project coordinator for the Laboratory for the Research and Prevention of Interpersonal Violence within the Department of Psychiatry of Rhode Island Hospital. His has assisted with research pertaining to sexual assault prevention and bystander intervention.

**Lindsay M. Orchowski**, PhD, is an Associate Professor (Research) at the Alpert Medical School at Brown University within the Department of Psychiatry of Human Behavior. She is also a Staff Psychologist within Lifespan Physician Group at Rhode Island Hospital. Her research focuses on the design and evaluation of sexual assault prevention approaches.

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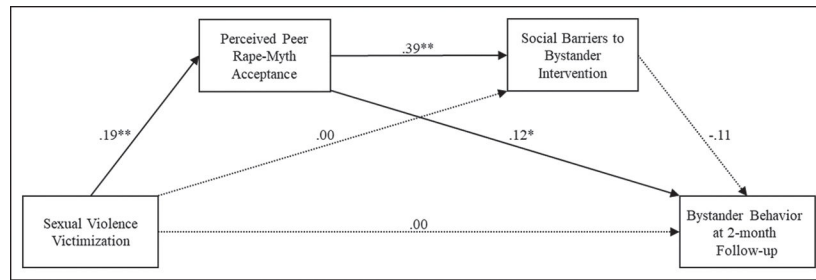
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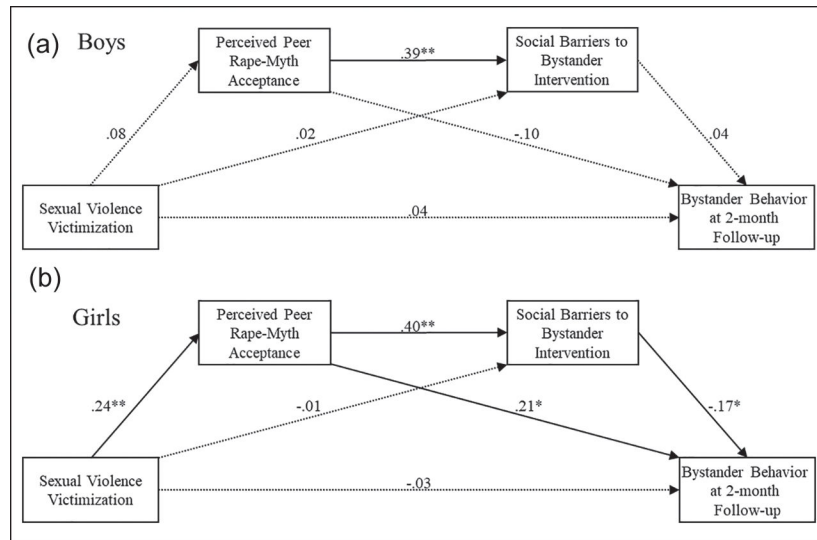
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**Figure 1.** Overall model showing standardized coefficients for direct paths. Nonsignificant paths displayed as dotted lines. T1 = Baseline; T2 = 2-month follow-up.  
\* $p < .05$ . \*\* $p < .001$ .



**Figure 2.** Models for boys (a) and girls (b) showing standardized coefficients for direct paths. Nonsignificant paths displayed as dotted lines. T1 = baseline; T2 = 2-month follow-up. \* $p < .05$ . \*\* $p < .001$ .

**Table 1.**

Numbers of Participants Who Provided Data on Each Study Variable by Gender.

	<i>n</i> for boys	<i>n</i> for girls
Variables		
1. Gender	359	484
2. SV	359	484
3. PRMA	306	421
4. SB	339	458
5. T2B	84	193

*Note.* SV = sexual victimization; PRMA = perceived rape myth acceptance; SB = perceived social barriers; T2B = Time 2 bystander behavior.

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**Table 2.**

Standardized Coefficients of Model Parameters and Goodness of Fit Indices for Measure of Perceived Social Barriers to Bystander Intervention.

Parameter estimates	Initial model			Revised model		
	$\beta$	<i>SE</i>	<i>p</i>	$\beta$	<i>SE</i>	<i>p</i>
Item 3	.10	0.07	.170	—	—	—
Item 4	.70	0.03	<.001	.70	0.03	<.001
Item 5	.58	0.03	<.001	.58	0.03	<.001
Item 6	.68	0.03	<.001	.68	0.03	<.001
Item 7	.71	0.02	<.001	.71	0.02	<.001
Item 10	.74	0.02	<.001	.74	0.02	<.001
Fit indices						
$\chi^2(df)$	116.39			32.51		
CFI	.94			.99		
TLI	.90			.98		
RMSEA	.07			.05		

*Note.* Item numbers correspond to items on the original Pros and Cons of Bystander Behavior Scale (Edwards et al., 2018).

**Table 3.**

Means, Standard Deviations, and Bivariate Correlations of Study Variables.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Gender	—	—	1	—	—	—	—
2. SV	—	—	.18**	1	—	—	—
3. PRMA	1.04	0.64	.07**	.16**	1	—	—
4. SB	1.37	0.63	.01	.05	.30**	1	—
5. T2B	7.82	5.12	.05*	.05*	.03	.04	1

*Note.* SV = sexual victimization; PRMA = perceived rape myth acceptance (0 = *strongly disagree* to 3 = *strongly agree*); SB = perceived social barriers (0 = *very unlikely* to 4 = *very likely*); T2B = Time 2 bystander behavior (0 = *bystander opportunity but no action* to 4 = *bystander opportunity and action taken 10 + times*).

\*  
 $p < .05$ .

\*\*  
 $p < .01$ .

**Table 4.**

Unstandardized Coefficients and Standard Errors for Paths in Hypothesized Models.

	Overall sample		Boys		Girls	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Direct effects						
SV→PRMA	.35**	0.06	.23	0.15	.38**	0.08
SV→SB	-.01	0.05	.06	0.12	-.02	0.07
SV→T2B	-.05	0.61	.83	0.71	-.28	0.76
PRMA→SB	.38**	0.06	.38**	0.07	.37**	0.07
PRMA→T2B	.89*	0.40	-.81	1.23	1.48*	0.71
SB→T2B	-.89	0.61	.34	1.64	-1.26**	0.48
Indirect effects						
SV→PRMA→SB	.14**	0.02	.09	0.05	.15**	0.02
SV→PRMA→T2B	.32*	0.15	-.18	0.26	.56*	0.31
SV→SB→T2B	.01	0.05	.02	0.10	.03	0.09
SV→PRMA→SB→T2B	-.12	0.08	.03	0.14	-.19**	0.07

Note. SV = sexual victimization; PRMA = perceived rape myth acceptance; SB = perceived social barriers; T2B = Time 2 bystander behavior.

\*  $p < .05$ .

\*\*  $p < .01$ .