

Predicting Bystander Efficacy and Willingness to Intervene in College Men and Women: The Role of Exposure to Varying Levels of Violence in Pornography

Violence Against Women

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Abstract

Students from two research universities completed items measuring the frequency of their using different kinds of pornography, and measures of their willingness and intent to intervene to help a bystander who might be experiencing sexual violence. Hierarchical logistic regressions showed that for men, violent/degrading pornography use, but not explicit but non-degrading pornography use, was significantly associated with reduced bystander willingness to intervene, but not associated with bystander efficacy. Women did not show the same impact of violent/degrading pornography use on the two bystander intervention variables. Results suggest violence/degrading pornography may contribute to a culture of acceptance of violence against women.

Keywords

pornography, violence, bystander intervention

The use of pornography is common among today's college students (Carroll et al., 2008; Yoder, Thomas, & Amin, 2005). Research using participants responding to the General Social Survey found that both men and women frequently use pornography for a wide variety of reasons (Stack, Wasserman, & Kern, 2004). A substantial amount

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of research has shown that such use is associated with a wide variety of harms (Brown & L'Engle, 2009; Kingston, Malamuth, Fedoroff, & Marshall, 2009; Vega & Malamuth, 2007; Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011). The degree of harm inflicted upon the user is largely due to the content of images viewed (Kingston et al., 2009; Vega & Malamuth, 2007). More violent pornography, in particular, is associated with an increase in the likelihood that the viewer will commit sexual assault (Brown & L'Engle, 2009; Kingston et al., 2009). Beyond the direct effects of individual pornography use, there are community-level effects. For example, a new line of research on college students is showing that use of pornography may inhibit the intervention of potential bystanders to help others around them who are in potential sexual assault situations (Brosi, Foubert, Bannon, & Yandell, 2011; Foubert, Brosi, & Bannon, 2011).

The purpose of the present study was to investigate the degree to which consumption of different types of pornography relates to perceived bystander efficacy and self-reported willingness to intervene in a sexual assault situation for both men and women. We hypothesized that consumption of violent and degrading pornography, compared with non-degrading but sexually explicit pornography, would be more strongly related to decreased perceived bystander efficacy and self-reported willingness to intervene for both men and women.

Background

Exposure to pornography among today's college students is nearly ubiquitous, particularly for men. An online survey of college students found that before turning 18, nearly all boys and an overwhelming majority of girls will have seen online pornography (Sabina, Wolak, & Finkelhor, 2008). Once they get to college, about four in five men and one in three women view pornography each year, with weekly use being the habit of half of the male college population (Boies, 2002; Carroll et al., 2008; Yoder et al., 2005).

Various levels of violence are depicted in pornography. Some pornography depicts violent and/or degrading relations, whereas other kinds are less violent. Research has shown that less violent pornography tends to be less upsetting to viewers in controlled studies, and may have a more limited (albeit significant) set of harms associated with it (Senn & Desmarais, 2004; Zillman, 2000). Although many studies examining use of sexually explicit materials do not distinguish between violent pornography and that which is less violent, this distinction is critical to the growing nuanced understanding of pornography's effects.

The distinction between violent and non-violent pornography has been robustly supported by pornography effects research. For instance, Senn and Radtke (1990) found women respond positively to non-violent pornography but negatively to violent and degrading pornography. Mulac, Jansma, and Linz (2002) found men who viewed pornographic films displayed more dominance toward a woman in a problem-solving activity with a woman following film exposure than did men who viewed non-violent pornography. This effect is not limited to men: Women who viewed pornographic films were subsequently less sympathetic to a rape victim than women who viewed non-violent pornographic films (Krafka, Linz, Donnerstein, & Penrod, 1997).

Ybarra and colleagues (2011) examined data for 1,588 youth (ages 10-15 years) over a 3-year time period. The researchers found that both boys and girls who sought out and viewed violent pornography were more than 6 times as likely to report sexual violence perpetration at follow-up as youth who did not seek out violent pornography. In contrast, seeking out non-violent pornography was not associated with sexual violence perpetration. Thompson, Koss, Kingree, Goree, and Rice (2011) examined how a set of variables including number of hours per week spent using pornography, drinking, witnessing parental conflict, being in a fraternity, and experiencing peer pressure to have sex related to perceived norms about rape (how much peers would approve of coercing women into sex in specific scenarios) and how these norms, in turn, predicted subsequent sexual violence perpetration 1 year later. They failed to find an association between pornography use and perpetrating sexual violence. However, the researchers only measured time spent using pornography, and not content of pornography. Given the Ybarra et al. (2011) results described above, where non-violent pornography did not relate to sexual coercion, this seems critical.

During the last decade or two, violence in pornography has become much more common (Dines, 2010). In a study of the most popular current pornography movies available, 88% of the scenes in each movie contained spanking, open-hand slapping, hair pulling, choking, or bondage. In 41% of these mainstream movies, a scene was included where a man put his penis in a woman's anus and then immediately into her mouth, without washing or changing condoms (Bridges, Wosnitzer, Scharrer, Sun, & Liberman, 2010). Another practice that is gaining popularity in pornography movies is inserting a penis down a woman's throat so hard that it causes gagging and vomiting (Malerek, 2009).

Research has identified several areas in which men and women differ in their pornography consumption and the impact it has upon them (Carroll et al., 2008). Men in samples that include early teenaged and college students, particularly those who view pornography frequently, report an increased likelihood of imitating the violence they see in pornography (Brown & L'Engle, 2009; Kingston et al., 2009; Vega & Malamuth, 2007; Ybarra et al., 2011). Women report an increased tolerance of men's violence in their own sexual relationships (Davis, Norris, George, Martell, & Heiman, 2006; Norris, Davis, George, Martell, & Heiman, 2004).

Perhaps most disturbingly, when men are violent toward women in pornography, 95% of the time women respond with either pleasure or with no response at all (Bridges et al., 2010). What script does this teach viewers and how does this differ by sex? First, it teaches men that women enjoy being targets of aggression. Second, it teaches women that if they are aggressed against during a sexual encounter, they should enjoy it. This outcome contributes to a cultural climate that tolerates men's violence against women (Bridges & Jensen, 2011).

When today's pornography shows such violence, and depicts the effects to be pleasurable, it is no wonder that many harmful effects result. For example, research on college men who view pornographic magazines, websites, pr videos, or who go to strip clubs found that they are more likely to commit sexual violence than those who do not (Carr & VanDeusen, 2004). More broadly, pornography use has been shown to be a

common risk factor for sexual aggression, particularly among frequent pornography users (Brown & L'Engle, 2009; Kingston et al., 2009; Vega & Malamuth, 2007; Ybarra et al., 2011). Given the research showing the extent of violence in pornography, it is not surprising a meta-analysis found that using pornography and attitudes supporting such violence are connected (Hald, Malamuth, & Yuen, 2009). Studies involving underage use of pornography suggest that the connection between seeing pornographic violence and having attitudes supporting such violence may be due to the way in which watching pornography increases men's objectification of women (Wright, 2014).

Several other harms of pornography exist. For example, a study of undergraduate college men showed that viewing is related to depression, anxiety, stress, and poor social functioning (Levin, Lillis, & Hayes, 2012). Relatedly, a study of a random sample of Danish adults found that men who watch more pornography are also more likely to be high on hostile sexism, whereas women who watch pornography are more likely to be high on benevolent sexism (Hald, Malamuth, & Lange, 2013). Although research on both college students and non-college going teens and young adults finds that some men are motivated to view pornography because they think it will make their sex lives better (Braun-Courville & Rojas, 2009; Stack et al., 2004), when heterosexual men use pornography, ratings of the quality of the sexual intercourse in their lives is worse, for both the men and their female partners (Bridges & Morokoff, 2011; Poulsen, Busby, & Galovan, 2013).

Although watching pornography is not legal for those under 18, such exposure is common (Sabina et al., 2008). Using pornography affects teenagers by shaping what they view as appropriate sexual activity (Peter & Valkenburg, 2006). Notably, surveys of teens who use pornography demonstrate they are less likely to use contraception during sexual encounters, exposing them to a wide range of risks (Wright, 2014), than teens to who do not use pornography.

Whether a viewer is male or female seems to have an impact on how pornography will affect the individual. Both girls and boys who watch pornography report earlier involvement in sexual activities than underage individuals who do not view pornography (Brown & L'Engle, 2009). Both boys and girls report anxiety over learning about sex through pornography. For girls, they report feeling that their bodies are not good enough compared with the women they see on film, in videos, and in pictures. Boys wonder whether they will be able to perform as well sexually as the male actors they watch in the fantasy world of pornography (Owens, Behun, Manning, & Reid, 2012). For boys, there is more violent behavior that results from watching pornography when compared with what girls learn. Underage boys who (illegally) watch pornography, particularly that which is more violent, report a higher likelihood of committing sexual harassment and sexual aggression, have more conduct problems in school, and have more legal trouble than boys who do not watch (Owens et al., 2012). This same effect is not evident in girls. Instead, studies of young women who view pornography have found they have stronger attitudes that support acceptance of rape and stronger beliefs that they should succumb to sexual violence when compared with young women who avoid pornography (Davis et al., 2006; Norris et al., 2004). Another sex difference found with young adults is that when men have high rates of pornography use, they

also tend to have more sex and, importantly, have higher risk-taking behaviors. Women who watch pornography do not necessarily have more sex; however, they tend to have higher rates of depression and lower self-worth, and they are less engaged with their university than women who avoid pornography. That these sex differences exist is logical, given that the content of pornography features male violence toward women with little to no violence by women toward men (Bridges et al., 2010).

Bystander Intervention

How then is violence stopped? Classic studies in the field of social psychology show that a promising way of interrupting violence is through encouraging bystander intervention before or during a violent incident (Latane & Darley, 1968). For an individual to intervene, Latane and Darley (1968) theorized that a five-step process must happen. One must notice an event, interpret it as an emergency, decide it is one's responsibility to act, know what to do, and then act. Banyard, Plante, and Moynihan (2005) developed two measures to assess the third and fourth steps of this model related to sexual assault situations, respectively. The first of these measures assesses a participant's willingness to help in a sexual assault situation, thus assessing the third level of the five-stage process. The fourth stage of Latane and Darley's model that leads to a decision to act is assessed by a measure of perceived bystander efficacy. This measure taps into the construct of whether participants believe that they know what to do in a given situation where intervention is possible (Banyard et al., 2005). When college students are taught to intervene, they often experience gains in the important areas of efficacy and willingness to step in as a bystander to help stop a troublesome behavior (Katz, Heisterkamp, & Fleming, 2011; Langhinrichsen-Rohling, Foubert, Brasfield, Hill, & Shelley-Tremblay, 2011). These gains have been shown to correlate with bystander behavior (Banyard, 2008).

The bystander intervention approach teaches potential bystanders safe and appropriate ways to intervene prior to or during sexual assault situations (Banyard et al., 2005; Coker et al., 2011; Moynihan & Banyard, 2008). Research on college students has shown programmatic interventions that include bystander intervention as a critical element are effective because they help alter community norms that contribute to violent behavior, including sexual violence (Banyard et al., 2005; Coker et al., 2011; Moynihan & Banyard, 2008). When educational interventions focus on bystander intervention with college students, they tend to be successful at decreasing the likelihood that male participants commit sexual assault, decreasing their likelihood of raping, and decreasing acceptance of rape myths when compared with control groups (Banyard et al., 2005; Foubert, Newberry, & Tatum, 2007).

A recent line of inquiry has explored the relationship between use of pornography and whether an individual will intervene to help prevent sexual violence. Research specific to college fraternity men has shown that those who have viewed sadomasochistic pornography during the previous year have significantly lower perceived bystander efficacy than men who had not viewed sadomasochistic pornography. College fraternity men who viewed rape pornography, compared with those who did

not, also report less willingness to intervene to help prevent a sexual assault (Foubert et al., 2011). College sorority women who viewed sadomasochistic pornography during the previous year had lower perceived bystander efficacy and lower self-reported bystander willingness than non-viewing sorority women (Brosi et al., 2011). Yet, at present, the exact relationship between perceived bystander efficacy and self-reported willingness to intervene as impacted by various types of pornography use remains unknown. Thus, the present study examined whether use of violent and/or degrading pornography, above and beyond the use of non-violent sexually explicit media, predicts bystander willingness and efficacy variables.

Based on research that college students find explicit but non-degrading pornography to be less bothersome (Senn & Desmarais, 2004), we hypothesized the following:

Hypothesis 1: Violent and degrading pornography use would be more strongly related to lower perceived bystander efficacy and self-reported willingness to intervene compared with non-degrading but sexually explicit pornography.

Given that pornography is made by men for men, women are more likely to survive sexual assault, and women are more often depicted as victims of violence and degradation in pornography, we predicted women's bystander efficacy and willingness to intervene would not be as affected by pornography as men's (for whom pornography serves to reinforce social messages about sex and power).

Method

Participants

Participants were students from a large Midwestern public university and a large Southern research university. As part of a larger study on pornography, religiosity, and bystander intervention, participants were recruited through each university's human subjects pool of students during the spring, summer, and fall 2011 semesters. At the Midwestern public university, participants were recruited through the human subjects "SONA" pool within the College of Education. Students from a wide variety of undergraduate and graduate courses have the opportunity to sign up for studies in exchange for course credit. This pool provided the opportunity to survey a broad range of students of various ages and stages of their education. Aside from having more women than men (an artifact of using a participant pool in a College of Education), participants closely mirrored university demographics. At the Southern research university, participants were recruited from Introductory Psychology courses through the department's Experimentrix system. Demographics of participants were comparable to those of the general psychology courses. A total of 450 surveys was collected through volunteers who signed up for course credit from an online research participation system. Eighteen surveys (4.0%) were discarded because the participants did not provide sufficient data (missing more than 50% of data points) and three surveys (0.7%) were removed for failing a consistency check. The remaining sample of participants consisted of 139

(32.4%) male and 290 (67.6%) female participants. Participants' mean age was 21.85 years ($SD = 5.37$ years), and ages ranged from 18-53. The sample included 143 (33.3%) first year, 69 (16.1%) sophomore, 89 (20.7%) junior, 58 (13.5%) senior, and 69 (16.1%) graduate students. One student did not report her year in school. The race/ethnicity of participants was 355 (82.8%) White, 32 (7.5%) African American, 21 (4.9%) Native American, 11 (2.6%) Hispanic/Latino, and 9 (2.1%) Asian. One person did not report her race/ethnicity. Our sample population closely resembled the student (undergraduate and graduate) populations on the campuses involved, with the exception of an over-representation of female and first-year students.

Materials

Participants completed measures including scales measuring use of diverse pornographic media, two measures of bystander intervention, and a brief demographic questionnaire. These measures were as follows.

Exposure to Sexual Materials Questionnaire (ESMQ). Respondents' use of pornography was measured with Frable, Johnson, and Kellman's (1997) ESMQ. For this 45-item scale, respondents indicated how many times in the past year they had been exposed to each of 44 different sexually explicit materials, such as viewing hardcore videos, purchasing pornographic magazines, or accessing adult Internet websites. Sample items include, "read a magazine containing pictures of men and women having sex with each other (showing penetration)" and "seen pictures or videos which depict 'sadoomasochistic' sex (i.e., people whipping, spanking, or using force with each other)." Responses were coded on a 7-point ordinal scale (1 = 0 times, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-10 times, 5 = 11-50 times, 6 = 51-100 times, 7 = more than 100 times). One item (purchased *Playgirl* magazine) was discarded because no participant endorsed it.

Two subscale scores were computed from the ESMQ by averaging conceptually equivalent items. Averages allowed us to retain the original Likert-type response scale, thereby facilitating interpretation. Items that referred to "hardcore" pornographic materials, to violence (e.g., rapes), or to sexual fetishes (including sadoomasochism, hebephilia, and pedophilia) were combined into a Violent/Degrading Pornography subscale. Cronbach's alpha for this 13-item subscale was .76, indicating acceptable reliability. Items that referred to "softcore" pornographic materials, to depictions of nudity, or to X-rated materials that were not specified in terms of violent or degrading content were combined into an Explicit But Not Degrading Pornography subscale. Cronbach's alpha for this 30-item subscale was .92, indicating excellent reliability. The two pornography use subscale average scores were significantly correlated for men ($r = .759, p < .001$) and women ($r = .575, p < .001$).

Bystander Willingness to Help Scale. The Willingness to Help Scale is a 12-item scale, developed by Banyard et al. (2005) and measures participants' degree of self-reported likelihood of engaging in 12 bystander behaviors. Each item is rated on a 5-point scale ranging from 1 (*not at all likely*) to 5 (*very likely*). Items came from research

literature and from discussions with advocates and professionals working in the field of sexual violence. For example, participants rate the likelihood that they will “Enlist the help of others if an intoxicated acquaintance is being taken upstairs at a party” and “Express disagreement with a friend who says forcing someone to have sex with them is ok.” Responses are averaged to create a total score, with higher numbers indicating greater willingness to intervene as a bystander. Strong criterion and construct validity are reported by Banyard (2008). A Cronbach’s alpha of .86 was found in the present study, indicating good internal reliability.

Bystander Efficacy Scale. Perceived ability to intervene as a bystander was measured by the 18-item Bystander Efficacy Scale developed by Banyard et al. (2005). This measure asks participants to indicate their confidence in performing each of 18 bystander behaviors. Participants rate items on a scale of 0-100%, indicating their percentage of confidence that they believe they know how to intervene in the scenario described. For example, participants rate their confidence that they could “Do something to help a very drunk person who is being brought upstairs to a bedroom by a group of people at a party” and “Speak up to someone who is making excuses for forcing someone to have sex with them.” A total efficacy score is created by averaging the percentage of confidence ratings for each of the 18 items. Strong criterion and construct validity data are reported by Banyard (2008). Cronbach’s alpha in this study was .93, indicating excellent internal reliability. The two bystander variables (willingness to help and efficacy) were significantly correlated for men ($r = .722, p < .001$) and women ($r = .633, p < .001$).

Results

Prior to evaluating study hypotheses, we calculated descriptive statistics for study variables. Results are summarized in Table 1. Men viewed both violent/degrading and explicit but non-degrading pornography more frequently than women ($ps < .001$). When examining bystander variables, men and women reported statistically equivalent levels of perceived bystander efficacy ($p > .05$), but women self-reported greater willingness to intervene than did men ($p < .001$).

To evaluate the hypotheses, we analyzed the data using a series of hierarchical linear regressions with perceived bystander efficacy and self-reported willingness to intervene as dependent variables, and age (Step 1), explicit but non-degrading pornography use frequency (Step 2), and violent/degrading pornography use frequency (Step 3) as the predictors. We opted to use hierarchical regressions to determine the extent to which pornography with violent and degrading content explained variance in bystander variables above and beyond sexually explicit media use alone (i.e., to help us better isolate the associations of violence/degradation). We also conducted separate regressions for men and women to isolate gender effects. Results are summarized below for each of the dependent variables.

Bystander Willingness to Intervene

Prior to evaluating the regression, we examined statistical assumptions. One man and two women were eliminated from this analysis because of standardized residuals $> |3|$.

Table 1. Descriptive Statistics for Variables by Gender.

Variable	Men (N = 140)	Women (N = 293)	Cohen's <i>d</i>	Test statistic
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)		
ESMQ—explicit but non-degrading pornography	1.73 (0.73)	1.25 (0.41)	0.81	$t(430) = 8.65^{***}$
ESMQ violent/ degrading pornography	1.32 (0.50)	1.18 (0.29)	0.34	$t(430) = 3.56^{***}$
Bystander willingness to intervene	3.79 (0.65)	4.03 (0.60)	-0.38	$t(431) = -3.84^{***}$
Bystander efficacy	75.67 (19.87)	78.80 (15.00)	-0.18	$t(431) = -1.82$ (<i>ns</i>)

Note. ESMQ = Exposure to Sexual Materials Questionnaire.

* $p < .05$. ** $p < .01$. *** $p < .001$.

All remaining assumptions were met. Table 2 provides a summary of regression results for the model predicting self-reported bystander willingness to intervene from the set of predictors. Confirming Hypothesis 1, for men, violent/degrading pornography use, but not explicit but non-degrading pornography use, was significantly associated with reduced self-reported bystander willingness to intervene. Although this relationship was consistent, we note that violent pornography use only added a 3% change in variance accounted for in the regression equation. Although the relationship is important, it is also low in magnitude. We also found that neither type of pornography was significantly associated with women's self-reported willingness to intervene in a potential sexual assault.

Bystander Efficacy

Three men and four women were eliminated from this analysis because of standardized residuals $>|3|$. All remaining statistical assumptions were met. Table 3 provides a summary of regression results. For men, violent/degrading pornography use was associated with reduced perceived efficacy to intervene in potential sexual assault situations, although the effect was not statistically significant ($p = .064$). Explicit but non-degrading pornography use was not significantly associated with bystander efficacy among men. For women, neither pornography use variable significantly related to perceived bystander efficacy.

Discussion

Several findings of interest emerged from our study. On a univariate level, women and men had the same level of perceived bystander efficacy. Yet, women had higher self-reported willingness to intervene than men. This confirms prior findings that men and women believe that if they observed a sexually violent situation involving others, they

Table 2. Summary of Hierarchical Regression Analysis for Variables Predicting Bystander Willingness to Intervene From Pornography Use Variables.

Variable	B (SE)	β	ΔF	ΔR^2
Men				
Step 1			$F(1, 136) = 16.93^{***}$.11
Age	0.05 (0.01)	.33		
Step 2			$F(1, 135) = 2.08$ (ns)	.01
ESMQ non-degrading	0.10 (0.07)	.12		
Step 3			$F(1, 134) = 4.38^*$.03
ESMQ violent/degrading	-0.31 (0.15)	-.26		
Women				
Step 1			$F(1, 286) = 16.19^{***}$.05
Age	0.02 (0.01)	.23		
Step 2			$F(1, 285) = 0.45$ (ns)	.00
ESMQ non-degrading	-0.06 (0.08)	-.04		
Step 3			$F(1, 284) = 0.90$ (ns)	.00
ESMQ violent/degrading	-0.13 (0.14)	-.07		

Note. ESMQ = Exposure to Sexual Materials Questionnaire.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Summary of Hierarchical Regression Analysis for Variables Predicting Bystander Efficacy From Pornography Use Variables.

Variable	B (SE)	B	ΔF	ΔR^2
Men				
Step 1			$F(1, 134) = 5.48^*$.04
Age	0.78 (0.33)	.20		
Step 2			$F(1, 133) = 0.22$ (ns)	.00
ESMQ non-degrading	-0.91 (1.95)	-.04		
Step 3			$F(1, 132) = 3.48$ (ns)	.03
ESMQ violent/degrading	-7.99 (4.28)	-.24		
Women				
Step 1			$F(1, 284) = 23.09^{***}$.08
Age	0.60 (0.13)	.27		
Step 2			$F(1, 283) = 0.53$ (ns)	.00
ESMQ non-degrading	-1.39 (1.91)	-.04		
Step 3			$F(1, 282) = 1.11$ (ns)	.00
ESMQ violent/degrading	-3.31 (3.14)	-.07		

Note. ESMQ = Exposure to Sexual Materials Questionnaire.

* $p < .05$. ** $p < .01$. *** $p < .001$.

could intervene if they chose. However, women report a higher degree of willingness to do so than men (Bannon, Brosi, & Foubert, 2013). It could be that women are more

likely to report a willingness to intervene because they share a kinship with other women and are more empathetic to the plight of a potential rape survivor than a man, who may empathize more with a potential perpetrator.

When we attempted to predict men's perceived bystander efficacy from non-degrading and violent/degrading pornography, we found that non-degrading pornography did not significantly predict perceived efficacy. However, violent/degrading pornography significantly predicted bystander efficacy, with higher use of violent/degrading pornography being associated with lower perceived efficacy to intervene in a potential sexual assault. Neither type of pornography use predicted women's perceived bystander efficacy.

We found a similar pattern of results when we sought to predict self-reported bystander willingness to intervene. For men, violent/degrading pornography predicted, albeit non-significantly, self-reported willingness to intervene. In contrast, non-degrading pornography did not predict self-reported willingness to intervene. Neither type of pornography use predicted women's perceived bystander willingness to intervene.

When studying the impact of pornography on bystander intervention, it thus seems most fruitful to study the associations between violent/degrading pornography and efficacy and willingness to intervene. It seems that the way violent/degrading pornography may relate to decreased bystander intervention in a hypothetical sexual assault is by being associated with a decline in intent or willingness to intervene. This result suggests that the use of violent/degrading materials is associated with callousness toward bystander intervention in a potential sexual assault situation. That is, rather than impacting a sense that one is able to intervene, violent/degrading pornography related to a decreased intention of intervening or assisting a potential assault victim. This would seem to support the assertion that violent/degrading pornography contributes to a climate that tolerates violence against women (Bridges & Jensen, 2011).

Prior longitudinal research suggests that pornography use tends to precede attitudinal variable changes (Wright, 2014). Thus, our results add evidence to the assertion that watching violent and/or degrading pornography may lead to a lower self-reported likelihood of intervening to prevent sexual assault. However, caution must be taken when interpreting this finding, as the order of effects between watching pornography and bystander intervention has not been conclusively demonstrated.

Our results inform theory by offering further evidence for the cultural climate theory (Bridges & Jensen, 2011). Cultural climate theory posits that pornography is part of a cultural milieu that makes men's violence against women more acceptable. Substantial research has shown that pornography use is commonplace, particularly by college men (Carroll et al., 2008; Foubert, Brosi, & Bannon, 2011; Yoder et al., 2005). In the present study, we found that men's use of violent/degrading pornography was associated with lower self-reported bystander willingness and, to a lesser extent, perceived efficacy. The pornography use that permeates the climate of college students, particularly men, appears to have a troubling relationship with whether one perceives one is willing or able to help intervene to prevent sexual violence. This seems to be due primarily to the violent and degrading nature of much of the popular pornography, as opposed to its sexually explicit nature.

This study has several limitations. First, the pool of participants came from only two campus populations using a process where participants signed up for the study based on their interest. Although using human subjects pools provides participants who are available, such studies are not always generalizable. By including participants from two universities and two different kinds of subjects pools (College of Education and Department of Psychological Science), we attempted to garner a maximally representative sample. Still, a random design would be substantially more preferable. In addition, representation from a broader, more diverse variety of campuses would strengthen the generalizability of the findings. Greater measurement of relevant demographic and other variables would help increase the variance in bystander variables that could be accounted for; as a whole, pornography use was only weakly associated with bystander perceptions. Given the correlational nature of the research design, it is difficult to determine the order of effects among the variables. We cannot conclude that violent pornography actually causes or leads to lower bystander intervention given our research design. This study is further limited by the nature of using self-report measures and the fact that a scale of social desirability was not included. Given the nature of the study, it could have been valuable to measure the degree to which participants were answering truthfully, and to selectively remove responses from participants who appeared to be answering in a deceptive manner.

Ultimately, our study joins others that find it is the violence and/or degradation in pornography that is problematic to users; in this case, it was associated with reduced self-perceived bystander intervention intentions and efficacy. A deeper understanding of the media messages conveyed in such materials, how they relate to attitudes and self-reported behavioral intentions, and how to counteract these messages may inform interventions that work toward ending sexual violence on campus.

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