Violence Against Women
1–22

DOI: 10.1177/1077801215597790
vaw.sagepub.com
SAGE

Predictors of Sexual Assault–Specific Prosocial Bystander Behavior and Intentions: A Prospective Analysis

Megan J. Murphy Austin[1], Christina M. Dardis[1], Milo S. Wilson[2], Christine A. Gidycz[1], and Alan D. Berkowitz[3]

Abstract

This study prospectively examined the impact of men's own attitudes and behaviors and perceptions of peer attitudes and behaviors on intentions and engagement in prosocial bystander behavior. Undergraduate men completed surveys at baseline and 4- and 7-month follow-ups. Men's perceptions of peer attitudes and behaviors and their own attitudes and behaviors were both important predictors of intentions. However, men's own attitudes and behaviors appeared to be more robustly predictive of behavior. Intentions to engage in bystander behavior were not predictive of behavior. Results support two specific areas of bystander intervention programming addressing misperceptions of social norms and personal attitudes and behaviors.

Keywords

bystander, sexual assault, social norms

Sexual Assault

According to Koss, Gidycz, and Wisniewski's (1987) groundbreaking study surveying college students across 32 campuses, approximately half of all college women report some form of sexual assault experience since the age of 14. Similar rates of sexual

[1]Ohio University, Athens, USA
[2]Clement J. Zablocki VA Medical Center, Milwaukee, WI, USA
[3]Independent Consultant, Mount Shasta, CA, USA

Corresponding Author:
Megan J. Murphy Austin, Woodland Centers, Inc., 112 East Memorial Drive, Pomeroy, OH 45769, USA.
Email: maustin@woodlandcenters.org

assault among college populations have been reported in more recent studies as well (e.g., Turchik, Probst, Irvin, Chau, & Gidycz, 2010). Furthermore, estimates indicate that approximately one fourth to one third of college men report actions consistent with definitions of sexually aggressive behavior (e.g., Loh, Gidycz, Lobo, & Luthra, 2005). For example, Loh et al. (2005) reported that 27.5% of college men reported behavior reflective of unwanted touching, sexual coercion, and attempted rape and nearly 4% of men reported behaviors consistent with the legal definition of rape.

Social Norms Theory

Social norms theory (for a review, see Berkowitz, 2010) posits that behavior is partly a function of the individual's perception of the attitudes and behaviors of his peers. According to this theory, men misperceive other men's attitudes and also the frequency with which others engage in risky behaviors (such as sexually aggressive behaviors). This misperception then provides them with "permission" to engage in such behavior. In support of this theory, evidence from empirical research suggests that men think that other men are more sexually aggressive and more accepting of sexism than they actually are (e.g., DeKeserdy, 1990; Loh et al., 2005). In addition, misperceived norms serve as justification for unhealthy or unsafe behaviors either when these acts are planned or once they have been committed. Social norms research has established that perceptions predict behavior across a wide variety of issues (e.g., alcohol, marijuana and tobacco use, gambling, seat-belt use, bullying) in a diverse range of populations (youth, college students, and adults), both in the United States and internationally (Berkowitz, 2005).

The focus of social norms theory on the influence that men have on each other's attitudes and behaviors has led to increased interest in the concept of prosocial bystander behavior in response to sexual assault risk. Sexual assault bystander intervention behaviors include both direct intervention, such as calling an authority, and indirect intervention, such as refusing to leave an intoxicated friend at a party (e.g., Burn, 2009).When men underestimate their peers' discomfort with certain behaviors, they are likely to refrain from expressing their own discomfort or intervening (for a review, see Berkowitz, 2010). For example, Kilmartin and colleagues (1999) found that men tend to underestimate the extent to which other men are uncomfortable with sexist behaviors toward women. To the extent that men misperceive their peers as being more comfortable with sexually aggressive behavior, they will be less likely to intervene when they witness inappropriate behavior in their peers.

Predicting Prosocial Bystander Behavior

Recently, researchers have examined correlates of bystander behavior specific to sexual assault (Banyard, 2008; Brown & Messman-Moore, 2010; Burn, 2009; McMahon & Farmer, 2009; Stein, 2007). For example, in a survey of more than 2,300 incoming male and female undergraduate students, McMahon (2010) found that greater willingness to intervene as a bystander, as measured by a modified version of Banyard's

Bystander Attitude Scale (Banyard, Plante, & Moynihan, 2004), was reported by females, by those who had previous rape education experience, by those who had indicated less rape myth acceptance, and by those who knew someone who had been sexually assaulted. McMahon and Farmer (2009) found that, among those on athletic teams, members with a closer team bond reported greater willingness to intervene.

Additional studies have focused specifically on social norms theory in examination of correlates of sexual assault-specific bystander intervention behavior and associated attitudes. In a qualitative study examining men's intentions to intervene in three written scenarios, Carlson (2008) found that the most common reason men stated for failing to intervene was evaluation apprehension, they did not want to appear weak to other men. In another study, Fabiano, Perkins, Berkowitz, Linkenback, and Stark (2003) found that the best predictor of men's willingness to intervene was their perception of other men's willingness to intervene. Two recent studies have specifically examined the differential influence of an individual's attitudes and their perceptions of others' attitudes on their intentions to engage in prosocial bystander behavior. Stein (2007) found that men's own attitudes about rape (e.g., rape supportive attitudes, discomfort with sexism) and their perceptions of their close friends' attitudes about rape both contributed to men's self-reported willingness to prevent rape. Similarly, Brown and Messman-Moore (2010) found that college men's own attitudes supportive of sexual aggression and their perceptions of peer attitudes supportive of sexual aggression were correlated with participants' self-reported willingness to intervene. However, when entered into a regression analysis together, only perceptions of peer attitudes emerged as predictive of participants' willingness to intervene.

Although they add to the growing body of literature in support of the social norms theory of prosocial bystander behavior, these studies are limited by various factors. For example, willingness or intentions to intervene has been used as a proxy for men's intervention behavior (Brown & Messman-Moore, 2010; Fabiano et al., 2003; Stein, 2007). Intentions have been posited to play a key role in the prediction of behavior, and have been highlighted in a number of models relating attitudes and behaviors, including the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985). However, a large body of experimental research has demonstrated that people fail to act on their intentions (see Ajzen, Brown, & Carvajal, 2004). This suggests that intentions may not be an adequate proxy for behavior. Thus, in studies of prosocial bystander behavior, it is important to incorporate measures of actual behavior in lieu of, or in addition to, those measures of intentions which have traditionally been used. Furthermore, although the studies reviewed above provide support for various correlates of bystander theory specific to sexual assault intervention, they are all limited in that they are cross-sectional in nature.

Only one study to date has prospectively examined predictors of actual self-reported bystander intervention in relation to sexual assault (Banyard, 2008). In her study, Banyard (2008) found that only bystander attitudes remained significant when predicting bystander behavior at a 2-month follow-up. Further research is needed to extend Banyard's prospective examination of predictors of bystander intervention. In her

analysis, Banyard did not include variables related to men's perceptions of social norms related to attitudes and sexual behavior. Given the growing body of literature which underscores the impact of men's perceptions of peers' attitudes and behaviors on prosocial bystander behavior (e.g., Brown & Messman-Moore, 2010), it seems important to prospectively examine variables related to social norms theory in predicting men's actual prosocial bystander behavior.

Rationale for the Current Study

The current study is an attempt to address the aforementioned limitations and to improve upon the methodology of previous investigations examining predictors of prosocial bystander behavior by utilizing a prospective design similar to that used by Banyard (2008) and including scales that have been used previously in social norms and prosocial bystander behavior studies. The purpose of this study was to prospectively examine the extent to which men's own attitudes and behaviors and their perceptions of the attitudes and behaviors of the average male in the university community predict both intentions to engage in prosocial bystander behavior and self-reported engagement in prosocial bystander behavior over 4- and 7-month follow-up periods. Specifically, we hypothesized that men's perceptions of their peers' attitudes and behaviors would be most predictive of men's intentions and behavior, as predicted by social norms theory and consistent with previous research (e.g., Banyard, 2008; Brown & Messman-Moore, 2010).

Method

Participants

The participants for the current study were from the control group of a larger sexual assault prevention program evaluation study (Gidycz, Orchowski, & Berkowitz, 2011) and consisted of 273 male undergraduate students at a large midwestern university. Of the 361 men who completed the baseline assessment, 82.3% returned for the 4-month follow-up ($n = 297$) and 76.5% returned for the 7-month follow-up ($n = 276$), with 273 completing all three sessions. Recruitment fliers encouraging men to participate in the Community Programming Initiative and including a brief description about the program were distributed around the residence halls. Participants completed study questionnaires at baseline with 4- and 7-month follow-up time points. The vast majority of the participants were heterosexual (98.2%), Caucasian (94.9%), and single men who had never been married (99.3%). Nearly all participants were enrolled in their first year of college (99.6%) and were 18-19 years old (98.9%). At the baseline assessment, 6.7% of the participants endorsed behavioral items consistent with a history of sexually aggressive behavior, 7.9% reported perpetrating sexually aggressive behavior between the baseline and the 4-month follow-up assessments, and 5.3% endorsed behaviors consistent with the perpetration of sexually aggressive behavior between the 4- and 7-month follow-up assessments.

Table 1. Measures Used to Assess Constructs of Interest.

Measure	Own attitudes and behaviors	Perception of others' attitudes and behaviors
Reactions to Offensive Language and Behavior Scale (ROLBA)	Prosocial Bystander Behavior	
Alcohol Use Disorders Identification Test (AUDIT)	Alcohol Use	
Sexual Experiences Survey (SES)	Sexual Aggression Perpetration	
Hypergender Ideology Scale (HIS)	Hypergender Ideology	
Boeringer Social Norms Measure (BSNM)	Differential Association	Differential Social Reinforcement
	Modeling Sexual Behavior	
	Likelihood of Rape	
Sexual Social Norms Inventory (SSNI)	Self Bystander Intentions	Other Bystander Intentions
	Self Comfort With Sexism	Other Comfort With Sexism
	Self Rape Supportive Attitudes/Behaviors	Other Rape Supportive Attitudes/Behaviors
	Self Sexual Behavior	Other Sexual Behavior

Measures

See Table 1 for a list of all measures used to assess constructs of interest. Descriptive statistics and internal consistencies for variables of interest can be found in Table 2.

Demographics. All participants completed a brief questionnaire that was used to collect relevant personal information regarding basic participant characteristics such as age, ethnicity and race, religious background, and sexual orientation.

Alcohol use. The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Baror, De la Fuente, & Grant, 1993) was used to screen for alcohol use problems, alcohol dependence, and problems associated with problem drinking. The AUDIT is a 10-item questionnaire, on which participants report the frequency of their drinking (0 = *never*, 1 = *monthly or less*, 2 = *2-4 times a month*, 3 = *2-3 times a week*, and 4 = *4 or more times a week*), the number of alcoholic drinks consumed on a typical drinking occasion (0 = *1 or 2*, 1 = *3 or 4*, 2 = *5 or 6*, 3 = *7-9*, and 4 = *10 or more*), how often they have experienced problems associated with their drinking (0 = *never*, 1 = *less than monthly*, 2 = *monthly*, 3 = *weekly*, and 4 = *daily or almost daily*; for example, *How often during the last year have you found that you were not able to stop drinking once you had started?*), and the impact of their drinking on others (0 = *no*; 2 = *yes, but not in the last year*; and 4 = *yes, during the last year*; for example, *Have you or*

Table 2. Means, Standard Deviations, Ranges, and Internal Consistencies for Variables of Interest.

	M	*SD*	Range	α
Self Prosocial Bystander Behavior T1 (ROLBA)	3.89	1.33	1-7	.79
Self Prosocial Bystander Behavior T2 (ROLBA)	4.65	1.29	1-7	.82
Self Prosocial Bystander Behavior T3 (ROLBA)	3.91	1.23	1-7	.82
Self Prosocial Bystander Intentions T1 (SSNI)	4.14	0.66	1.25-5	.82
Self Prosocial Bystander Intentions T2 (SSNI)	4.03	0.64	1.38-5	.79
Self Prosocial Bystander Intentions T3 (SSNI)	3.96	0.71	1.5-5	.83
Self Comfort With Sexism T1 (SSNI)	2.56	0.77	1-5	.77
Self Comfort With Sexism T2 (SSNI)	2.55	0.79	1-5	.84
Self Rape Supportive Attitudes/Behaviors T1 (SSNI)	4.37	0.61	1.22-5	.81
Self Rape Supportive Attitudes/Behaviors T2 (SSNI)	4.26	0.66	2.22-5	.84
Self Inappropriate Sexual Dating Behaviors T1 (SSNI)	3.76	0.66	1.43-5	.71
Self Inappropriate Sexual Dating Behaviors T2 (SSNI)	3.74	0.72	1.57-5	.76
Other Prosocial Bystander Behavior Intentions T1 (SSNI)	3.74	0.42	1.38-5	.83
Other Prosocial Bystander Behavior Intentions T2 (SSNI)	3.65	0.75	1-5	.85
Other Comfort With Sexism T1 (SSNI)	2.32	0.70	1-4.86	.81
Other Comfort With Sexism T2 (SSNI)	2.37	0.74	1-5	.81
Other Rape Supportive Attitudes/Behaviors T1 (SSNI)	3.68	0.70	1-5	.84
Other Rape Supportive Attitudes/Behaviors T2 (SSNI)	3.56	0.70	1-5	.82
Other Inappropriate Sexual Dating Behaviors T1 (SSNI)	2.97	0.72	1-5	.80
Other Inappropriate Sexual Dating Behaviors T1 (SSNI)	2.97	0.80	1-5	.84
Differential Association With Sexually Aggressive Peers T1 (BSNM)	3.09	1.38	2-10	.66
Differential Association With Sexually Aggressive Peers T2 (BSNM)	2.73	1.27	2-10	.71
Differential Social Reinforcement From Peers T1 (BSNM)	10.48	2.63	3-15	.61
Differential Social Reinforcement From Peers T1 (BSNM)	10.35	2.65	3-15	.64
Modeling of Sexual Coercion T1 (BSNM)	5.48	2.78	3-15	.71
Modeling of Sexual Coercion T2 (BSNM)	4.51	2.14	3-15	.72
Likelihood of Rape T1 (BSNM)	2.76	1.67	2-10	.80
Likelihood of Rape T2 (BSNM)	2.70	1.56	2-10	.77
Self Hypergender Ideology T1 (HIS)	51.05	15.61	21-99	.87
Self Hypergender Ideology T2 (HIS)	49.98	15.92	19-92	.88
Sexual Assault Perpetration T1 (SES)	1.09	0.35	1-3	
Sexual Assault Perpetration T2 (SES)	1.08	0.33	1-3	
Alcohol Use T1 (AUDIT)	10.26	5.75	0-36	.73
Alcohol Use T2 (AUDIT)	10.69	6.02	0-36	.73

Note. Internal consistencies are not reported for sexual assault perpetration as items in this measure are intended to be independent. ROLBA = Reactions to Offensive Language and Behavior Scale; SSNI = Sexual Social Norms Inventory; BSNM = Boeringer Social Norms Measure; HIS = Hypergender Ideology Scale; SES = Sexual Experiences Survey; AUDIT = Alcohol Use Disorders Identification Test.

someone else been injured because of your drinking?). Participants' scores were summed, with higher scores indicative of greater problems with alcohol use. In comparison with other screeners for alcohol use problems, dependence, and problem drinking behaviors, the AUDIT has evidenced a high degree of accuracy and reliability. A correlation coefficient of .78 was demonstrated between the AUDIT and the CAGE (Cut down, Annoyed, Guilty, Eye Opener; Ewing, 1984), another commonly used screener for alcohol use problems.

Sexual assault perpetration. The Sexual Experiences Survey (SES; Koss & Oros, 1982) is a 10-item self-report survey that was used to assess the perpetration of sexually aggressive behavior. Respondents were asked to answer *yes* or *no* to each item in a self-report format. For each item, respondents were asked to indicate the number of times they had engaged in the behavior. Items assess a variety of sexually aggressive behaviors along a continuum that ranges from forced sexual touching to rape. The SES is the most frequently used of all similar measures assessing sexually aggressive behavior and has demonstrated high internal consistency with men ($\alpha = .89$) and 2-week test–retest reliability ($r = .93$; Koss & Gidycz, 1985). At the time of the pretest, participants were asked about their experiences with the 10 sexually coercive behaviors from the age of 14 until the time of the present study. During each of the two follow-up sessions, participants were asked about their sexually aggressive experiences since the time of their last assessment. For the purposes of this study, men were classified into two categories: (a) sexual assault perpetrators and (b) nonperpetrators.

Hypergender ideology. The Hypergender Ideology Scale—Short Form (HGIS; Hamburger, Hogben, McGowen, & Dawson, 1996) was used to assess the extent to which participants endorsed stereotypical gender roles. The scale contains 19 self-report items which are rated on a 6-point scale, from 1 (*strongly disagree*) to 6 (*strongly agree*; for example, *A true man knows how to command others*.). Overall scores were obtained by summing the scores for all of the items, with higher scores indicating more extreme endorsement of stereotypical gender roles. The short form of the HGIS has demonstrated good test–retest reliability over a 3-month period with college men ($r = 76$, $p < .002$; Loh, Gidycz, Lobo, & Luthra, 2001).

Attitudinal and behavioral norms related to sexual aggression. The Sexual Social Norms Inventory (SSNI; Bruner, 2002) was used to assess participants' report about their own sexual attitudes and behaviors, and their perceptions of their male peers' sexual attitudes and behaviors regarding sex, dating, and sexual aggression. The scale includes 60 self-report items with four subscales derived from a factor analysis. The Bystander Intention subscale assessed the degree to which participants believed the average male student at their university would intervene when witnessing another man being emotionally, physically, or sexually aggressive toward a woman (e.g., *If I witnessed a rape, I would call the police*.). The Comfort with Sexism subscale assessed the degree of comfort men feel when witnessing sexist comments and behavior directed toward women (e.g., *I have a problem with men joking about scoring with women*.). The Rape

Supportive Attitudes and Behaviors subscale assessed the extent to which men agree with attitudes or engage in actions that support sexually assaultive behaviors toward women (e.g., *Being drunk is no excuse for forcing a women to have sex*.). Finally, the Inappropriate Sexual Dating Behavior subscale assessed the extent to which men endorse or engage in coercive actions to obtain sex in a dating relationship (e.g., *I encourage my date to drink so she will let me have sex with her*.). Participants' self-reported Prosocial Bystander Intentions is the outcome variable that was used in the first three regression analyses predicting men's intentions to engage in prosocial bystander behavior during a sexual assault situation. Participants completed this measure twice at each time point, once in reference to their own attitudes and behaviors and once in reference to their male peers' attitudes and behaviors. Respondents rated each item on a 5-point scale, from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants' overall scores for each measure were obtained by summing their responses. Higher scores indicate greater endorsement of self and perceived other bystander behavior and discomfort with sexism, fewer rape supportive attitudes and behaviors, and less inappropriate sexual dating behavior.

The Boeringer Social Norms Measure (BSNM; Boeringer, Shehan, & Akers, 1991) was also used to assess various attitudes and perceived peer group norms related to sexual aggression. Four of the five subscales were utilized in the study: Differential Association, Modeling Sexual Behavior, Likelihood of Rape, and Differential Social Reinforcement. Men's association with other men who have rape supportive attitudes and behaviors was measured with the Differential Association subscale (e.g., *How many of your friends have gotten a woman drunk or high to have sex with her?*); men's perception of their peers' approval of their own sexually aggressive behavior was measured with the Differential Social Reinforcement subscale; men's modeling of sexually coercive behaviors based on their viewing of sexually aggressive pornographic materials was measured with the Modeling Sexual Behavior subscale; and men's likelihood of engaging in sexually aggressive behavior was measured with the Likelihood of Rape subscale. Respondents rated each item on a 5-point scale. Responses for all subscales were summed and higher scores indicate greater endorsement of association with men who exhibit rape supportive attitudes and behaviors, greater perceived peer approval of sexually aggressive behavior, greater likelihood of modeling of sexually aggressive behavior that is viewed in pornographic materials, and perceived likelihood to commit sexual assault.

Willingness to engage in prosocial bystander behavior. The Reactions to Offensive Language and Behavior Scale (ROLBA) is a 26-item self-report scale, adapted from questions used by Berkowitz (2002), which measures men's degree of discomfort with and willingness to confront the inappropriate behavior of other men, as well as their perceptions of other men's discomfort with and willingness to confront these behaviors. This scale yields four subscales; however, only the Self Prosocial Bystander Behavior subscale was used in the current analyses to measure self-reported prosocial bystander behavior at each time point. Participants' self-reported Prosocial Bystander Behavior is the outcome variable that was used in the last three regression analyses predicting

men's actual engagement in prosocial bystander behavior during a sexual assault situation. Several items assess willingness to confront behavior in other men on a 7-point scale from 1 (*always*) to 4 (*sometimes*) to 7 (*never*)—for example, *When I hear a sexist comment, I indicate my displeasure; When I witness a situation in which it looks like a woman will end up being taken advantage of, I intervene (e.g., by asking if everything is okay, distracting him by starting a conversation, or asking the guy to leave her alone); and When I see a man hitting on a woman who appears to be extremely intoxicated, I intervene (e.g., by asking if everything is okay, distracting him by starting a conversation, or asking the guy to leave her alone)*. Participants' responses were summed, with higher scores indicating greater prosocial bystander behavior.

Procedure

Data were collected at baseline and 4- and 7-month follow-up sessions over the course of 1 academic year. Men in the control group of the program evaluation study (who comprise the current sample) received US$20 for completing questionnaires at each assessment session. Two cohorts of men participated in the study such that data were collected over 2 years. Study participants completed a baseline assessment at the beginning of the academic year, reporting on experiences of sexual aggression since the age of 14 and on relevant attitudes and behaviors. At the 4- and 7-month follow-up assessments, men again completed outcome assessments and reported on experiences of sexual aggression over each interim period.

Results

Descriptive Statistics

See Table 3 for all Time 1 correlations. Because the relationship between intentions to engage in prosocial bystander behavior and the actual act of engaging in prosocial bystander behavior were of particular interest in this study, these correlations merit consideration. The correlation between T1 intentions and T1 behavior was $r = .26$, $p < .05$, with a correlation of $r = .13$, $p < .05$, between T1 intentions and T2 behavior, and $r = .20$, $p < .01$, for T2 intentions and T3 behavior. The correlation between T1 behavior and T2 intentions was $r = .20$, $p < .01$, and between T2 behavior and T3 intentions was $r = .28$, $p < .001$.

Overview of data analyses. Six linear regressions were conducted both cross-sectionally and prospectively to determine predictors of men's intentions to engage in prosocial bystander behavior as well as actual engagement in prosocial bystander behavior, with the same set of analyses used for both outcome variables. For the purposes of these analyses, variables describing personal attitudes and behaviors were called "self" variables. The outcome variables were men's self-reported intentions to engage in prosocial bystander behavior and actual bystander behavior. Both were included in the models as predictors of the other, as directionality of cause could not be assumed

Table 3. Correlations Among Continuous Variables of Interest.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Self Bystander Intervention (ROLBA)	1	.26*	−.09	−.19*	.15*	.37*	.09	.02	−.13*	−.15*	.19*	.10*	.19*	.06	.15*
2.	Self Bystander Intentions (SSNI)		1	−.11*	−.31*	.32*	.16*	.52*	.18*	−.26*	−.16*	.50*	.10	−.04	.29*	.26*
3.	Self Alcohol Use (AUDIT)			1	.29*	−.33*	−.20*	−.14*	.17*	.44*	.09	−.02	.06	.03	.10*	−.27*
4.	Self Hypergender Ideology (HIS)				1	−.49*	−.31*	−.40*	.23*	.34*	.24*	−.16*	−.03	−.05	−.17*	−.31*
5.	Self Appropriate Sexual Dating Behaviors (SSNI)					1	.20*	.54*	−.26*	−.40*	−.32*	.14*	.28*	.01	.26*	.41*
6.	Self Discomfort With Sexism (SSNI)						1	.01	−.07	−.12*	−.06	−.03	−.06	.52*	−.17*	.22*
7.	Self Nonrape Supportive Attitudes/ Behaviors (SSNI)							1	−.15*	−.25*	−.30*	.25*	.05	−.21*	.33*	.24*
8.	Self Modeling of Sexual Coercion (BSNM)								1	.31*	.21*	−.18*	−.12*	−.02	−.18*	−.23*
9.	Self Differential Association (BSNM)									1	.32*	−.21*	−.15*	−.08	−.19*	−.40*
10.	Self Likelihood of Rape (BSNM)										1	−.17*	−.15*	−.01	−.27*	−.24*
11.	Other Bystander Intentions (SSNI)											1	.36*	.13*	.58*	.19*
12.	Other Appropriate Sexual Dating Behavior (SSNI)												1	.21	.57*	.12*
13.	Other Discomfort With Sexism (SSNI)													1	−.05	.08
14.	Other Nonrape Supportive Attitudes/ Behaviors (SSNI)														1	.15*
15.	Other Differential Social Reinforcement (BSNM)															1

Note. ROLBA = Reactions to Offensive Language and Behavior Scale; SSNI = Sexual Social Norms Inventory; AUDIT = Alcohol Use Disorders Identification Test; HIS = Hypergender Ideology Scale; BSNM = Boeringer Social Norms Measure.
*Significant at $p < .05$.

based on previous literature. The nine "self" variables used as predictors in the regressions include the degree to which one associates with peers who commit sexually aggressive behaviors, personal likelihood of committing sexually aggressive behaviors, use of pornographic materials, personal comfort with sexism, degree of agreement with rape supportive attitudes and behaviors, inappropriate sexual dating behaviors, level of hypergender ideology, alcohol use, and prior sexual aggression. Identical regressions were conducted for intended bystander behavior and actual bystander behavior. The six regression analyses (three regressions each for intentions and behaviors) include (a) cross-sectional analyses predicting the impact of personal or "self" attitudes, behaviors and perceptions on prosocial bystander behavior intentions and behavior, and prospective regressions, including (b) T1 "self" variables to predict T2 prosocial bystander behavior intentions and behavior and (c) T2 "self" variables to predict T3 prosocial bystander behavior intentions and behavior. Bonferroni adjustment was used to control for family-wise error.

Next, for both the analyses of predictors of intentions to engage in prosocial bystander behavior and the predictors of engaging in prosocial bystander behavior, variables describing perceptions of peers' attitudes and behaviors were called "other" variables. These five variables include one's perceptions of peers' intentions to act as a prosocial bystander, perceptions of peer approval of sexual aggression, perceptions of peers' comfort with sexism, perceptions of peers' rape supportive attitudes and behaviors, and perceptions of peers' engagement in inappropriate sexual dating behaviors. Thus, the other six regressions (three regressions each for intentions and behaviors) include (a) cross-sectional analyses predicting the impact of perceived peer or "other" behaviors and attitudes on prosocial bystander behavior intentions and behaviors, and prospective regressions, including (b) T1 "other" variables to predict T2 prosocial bystander behavior intentions and behaviors and (c) T2 "other" variables to predict T3 prosocial bystander behavior intentions and behaviors.

Following this step, significant variables at each time point (e.g., cross-sectional, T1-T2, and T2-T3) were combined to create six final regressions, including both "self" and "other" variables to predict prosocial bystander behavior and intentions. The significant variables from these preliminary analyses are presented below with their regression weights along with the results from the final regression analyses.

Cross-sectional analyses of prosocial bystander behavior intentions with "self" and "other" variables. The final cross-sectional linear regression analysis of intentions to engage in prosocial bystander behavior at T1 included all significant "self" and "other" variables from the preliminary analyses. These significant variables included the "self" variables of personal prosocial bystander behavior at T1, $\beta = .08$, $SE\ \beta = .03$, $t(253) = 2.89$, $p < .01$, $pr = .18$; extent of association with sexually aggressive peers, $\beta = -.06$, $SE\ \beta = .03$, $t(253) = -2.04$, $p < .05$, $pr = -.13$; use of pornographic materials, $\beta = -.03$, $SE\ \beta = .01$, $t(253) = -2.37$, $p < .05$, $pr = -.15$; and personal nonrape supportive attitudes and behaviors, $\beta = .57$, $SE\ \beta = .07$, $t(253) = 8.50$, $p < .001$, $pr = .47$. Significant "other" variables included perceived lack of support by others for committing sexually aggressive acts, $\beta = .05$, $SE\ \beta = .01$, $t(265) = 4.07$, $p < .001$, $pr = .24$; perceived peer

Table 4. Final Multiple Regression Analyses of Bystander Intentions With Both "Self" and "Other" Variables (n = 267).

	β	SE β
T1 Bystander Intentions	R^2 = .474, p < .001	
Self Prosocial Bystander Behavior (ROLBA)	.07**	.02
Self Differential Association (BSNM)	−.04	.03
Self Pornography Use (BSNM)	−.01	.01
Self Rape Supportive Attitudes and Behaviors (SSNI)	.43***	.05
Others' Differential Social Reinforcement (BSNM)	.01	.01
Others' Prosocial Bystander Behavior Intentions (SSNI)	.38***	.05
Others' Discomfort With Sexism (SSNI)	−.03	.04
T2 Bystander Intentions	R^2 = .148, p < .001	
Self Prosocial Bystander Behavior (ROLBA)	.06	.03
Self Rape Supportive Attitudes/Behaviors (SSNI)	.22**	.06
Others' Differential Social Reinforcement (BSNM)	.04**	.02
Others' Prosocial Bystander Behavior Intentions (SSNI)	.14*	.06
T3 Bystander Intentions	R^2 = .213, p < .001	
Self Prosocial Bystander Behavior (ROLBA)	.12**	.03
Self Rape Supportive Attitudes and Behaviors (SSNI)	.33***	.06
Others' Differential Social Reinforcement (BSNM)	.02	.02
Others' Prosocial Bystander Behavior Intentions (SSNI)	.19**	.06

Note. ROLBA = Reactions to Offensive Language and Behavior Scale; BSNM = Boeringer Social Norms Measure; SSNI = Sexual Social Norms Inventory.
*p < .05. **p < .01. ***p < .001.

intentions to intervene in prosocial bystander situations, β = .49, *SE* β = .06, $t(265)$ = 8.24, p < .001, pr = .45; and perceptions of others' discomfort with sexism, β = .12, *SE* β = .05, $t(265)$ = 2.34, p < .05, pr =−.14. The final model with T1 "self" and "other" variables accounted for 47.4% of the variance in prosocial bystander behavior intentions at T1, $F(7, 259)$ = 35.216, p < .001. Significant relationships with prosocial bystander behavior intentions were found for one's own prior prosocial bystander behavior, $t(259)$ = 2.84, p < .01, pr = .17; personal nonrape supportive attitudes and behaviors, $t(259)$ = 8.10, p < .001, pr = .45; and perceptions of peers' intentions to intervene in prosocial bystander situations, $t(259)$ = 8.47, p < .001, pr = .47. These relationships were such that individuals who endorsed greater prosocial bystander intentions at T1 were more likely to have engaged in prior prosocial bystander behavior, held fewer rape supportive attitudes and beliefs, and perceived that peers were more likely to intervene as prosocial bystanders. Table 4 summarizes these results.

Prospective analyses of prosocial bystander behavior intentions at T2 with "self" and "other" variables. The final prospective linear regression analysis of prosocial bystander behavior intentions at T2 included all significant "self" and "other" variables found in the preliminary prospective T2 analyses. These variables included the "self" variables of prosocial

bystander behavior at T1, β = .09, *SE* β = .03, $t(230) = 2.65$, $p < .01$, $pr = .17$, and personal nonrape supportive attitudes and behaviors at T1, β = .18, *SE* β = .08, $t(230) = 2.44$, $p < .05$, $pr = .16$. The "other" variables included perceived lack of reinforcement from others for committing sexually aggressive acts, β = .06, *SE* β = .02, $t(240) = 4.00$, $p < .001$, $pr = .25$, and perceptions of peers' intentions to engage in prosocial bystander behavior, β = .14, *SE* β = .07, $t(240) = 1.99$, $p < .05$, $pr = .13$. The final model with T1 "self" and "other" variables accounted for 14.8% of the variance at T2, $F(4, 241) = 11.61$, $p < .001$. Significant predictors of prosocial bystander behavior intentions included T1 personal nonrape supportive attitudes and behaviors, $t(241) = 3.33$, $p < .01$, $pr = .21$; T1 perceptions of lack of peer reinforcement for committing sexually aggressive acts, $t(241) = 2.72$, $p < .01$, $pr = .17$; and perceptions of peers' intentions to engage in prosocial bystander behavior, $t(241) = 2.49$, $p < .05$, $pr = .16$. These relationships were such that individuals who endorsed fewer rape supportive attitudes and behaviors at T1, who perceived less reinforcement from peers for engaging in sexually aggressive acts at T1, and who perceived that peers were more likely to engage in prosocial bystander behaviors endorsed greater intentions to intervene as a prosocial bystander at T2. Table 4 summarizes these results.

Prospective analyses of prosocial bystander behavior intentions at T3 with "self" and "other" variables. The final prospective linear regression analysis of prosocial bystander behavior intentions at T3 included all significant T2 "self" and "other" variables found in the preliminary prospective T3 analyses. These variables included the significant "self" variables of having engaged in prosocial bystander behavior at T2, β = .07, *SE* β = .04, $t(232) = 1.99$, $p < .05$, $pr = .13$, and lack of rape supportive attitudes and behaviors at T2, β = .28, *SE* β = .08, $t(232) = 3.40$, $p < .01$, $pr = .22$. Significant "other" variables included perceived peers' lack of reinforcement for committing sexually aggressive acts, β = .07, *SE* β = .02, $t(240) = 4.39$, $p < .001$, $pr = .27$, and perceptions of peers' intentions to engage in prosocial bystander behavior, β = .19, *SE* β = .07, $t(240) = 2.79$, $p < .01$, $pr = .18$. The final model with T2 "self" and "other" variables accounted for 21.3% of the variance in prosocial bystander behavior intentions at T3, $F(4, 241) = 17.58$, $p < .001$. Significant predictors of prosocial bystander intentions at T3 included having engaged in prosocial bystander behavior at T2, $t(241) = 3.73$, $p < .001$, $pr = .23$; lack of personal rape supportive attitudes and behaviors, $t(241) = 5.23$, $p < .001$, $pr = .32$; and perceptions of peers' intentions to engage in prosocial bystander behavior, $t(241) = 3.29$, $p < .01$, $pr = .21$. These relationships were such that individuals who engaged in greater prosocial bystander behavior, who endorsed fewer rape supportive attitudes and behaviors, and who perceived that peers were more likely to engage in prosocial bystander behavior at T2 endorsed greater intentions to engage in prosocial bystander behavior at T3. Table 4 summarizes these results.

Regression Analyses Predicting Actual Bystander Behavior

Cross-sectional analyses of prosocial bystander behavior with "self" and "other" variables. The final cross-sectional linear regression analysis predicting prosocial bystander behavior at T1 included all significant "self" and "other" variables. These

Table 5. Final Multiple Regression Analyses for Prosocial Bystander Behavior With Both "Self" and "Other" Variables (n = 271).

	β	$SE\ \beta$
T1 Bystander Behavior	R^2 = .165, p < .001	
Self Prosocial Bystander Behavior Intentions (SSNI)	.35**	.11
Self Discomfort With Sexism (SSNI)	.53***	.11
Others' Discomfort With Sexism (SSNI)	.08	.12
Others' Differential Social Reinforcement (BSNM)	.03	.03
T1 Bystander Intervention	R^2 = .165. p < .001	
Self Prosocial Bystander Behavior Intentions (SSNI)	.35**	.11
T2 Bystander Behavior	R^2 = .135, p < .001	
Self Discomfort With Sexism (SSNI)	.61***	.12
Others' Discomfort With Sexism (SSNI)	−.07	.13
Others' Differential Social Reinforcement (BSNM)	.03	.03
T3 Bystander Behavior	R^2 = .176, p < .001	
Lack of Inappropriate Sexual Dating Behaviors (SSNI)	.32*	.13
Self Discomfort With Sexism (SSNI)	.48***	.12
Others' Discomfort With Sexism (SSNI)	.10	.13
Others' Differential Social Reinforcement (BSNM)	.04	.03

Note. SSNI = Sexual Social Norms Inventory; BSNM = Boeringer Social Norms Measure.
*p < .05. **p < .01. ***p < .001.

significant variables obtained in the preliminary analyses included the "self" variables of personal intentions to engage in prosocial bystander behavior at T1 β = .40, *SE* β = .14, $t(253) = 2.89$, $p < .01$, $pr = .18$, and personal discomfort with sexism at T1, β = .55, *SE* β = .11 $t(253) = 5.05$, $p < .001$, $pr = -.30$. Significant "other" variables included perceived peers' discomfort with sexism at T1, β = .30, *SE* β = .11, $t(264) = 2.68$, $p < .01$, $pr = .16$, and perceived lack of reinforcement from others for committing sexually aggressive acts, β = .07, *SE* β = .03, $t(264) = 2.40$, $p < .05$, $pr = .15$. The final model with T1 "self" and "other" variables accounted for 16.5% of the variance in prosocial bystander behavior at T1, $F(4, 266) = 14.30$, $p < .001$. Significant relationships with prosocial bystander behavior were found for personal intentions to engage in prosocial bystander behavior, $t(266) = 3.06$, $p < .01$, $pr = .19$, and personal discomfort with sexism, $t(266) = 4.66$, $p < .001$, $pr = .28$. These relationships were such that individuals who were less comfortable with sexist remarks and behaviors at T1 and who had greater intentions to engage in prosocial bystander behavior at T1 were more likely to engage in prosocial bystander behavior at T1. Table 5 summarizes these results.

Prospective analyses of prosocial bystander behavior at T2 with "self" and "other" variables. The final prospective linear regression analysis of prosocial bystander behavior at T2 included all significant "self" and "other" variables found in the preliminary prospective T2 analyses. These significant variables included the "self" variable of personal discomfort with sexism at T1, β = .62, *SE* β = .12, $t(234) = 5.33$, $p < .001$,

pr = −.33, and significant "other" variables included perceived peers' discomfort with sexism, β = .25, *SE* β = .12, *t*(243) = 2.06, *p* < .05, *pr* = .13; perceived peers' lack of sexually aggressive dating behaviors, β = .29, *SE* β = .14, *t*(243) = 2.07, *p* < .05, *pr* = .13; and perceived lack of reinforcement from others for committing sexually aggressive acts, β = .07, *SE* β = .03, *t*(243) = 2.34, *p* < .05, *pr* = .15. The final model with T1 "self" and "other" variables accounted for 13.5% of the variance in prosocial bystander behavior at T2, *F*(4, 245) = 10.76, *p* < .001. Significant predictors of prosocial bystander behavior included T1 personal discomfort with sexism, *t*(245) = 4.89, *p* < .001, *pr* = .30, and T1 perceptions of peers lack of involvement in sexually aggressive dating behaviors, *t*(245) = 2.94, *p* < .01, *pr* = .18. These relationships were such that individuals who were less comfortable with sexist remarks and behaviors and who perceived that their peers engaged in fewer inappropriate sexual dating behaviors engaged in greater prosocial bystander behavior at T2. Table 5 summarizes these results.

Prospective analyses of prosocial bystander behavior at T3 with "self" and "other" variables. The final prospective linear regression analysis of prosocial bystander behavior at T3 included all significant T2 "self" and "other" variables found in the preliminary prospective T3 analyses. These significant variables included the "self" variables of personal discomfort with sexism at T2, β = .59, *SE* β = .10, *t*(233) = 5.86, *p* < .001, *pr* = .36, and personal lack of involvement in inappropriate sexual dating behaviors at T2, β = .54, *SE* β = .16, *t*(233) = 3.32, *p* < .01, *pr* = .21. Significant "other" variables included perceived peers' discomfort with sexism, β = .25, *SE* β = .12, *t*(240) = 2.18, *p* < .05, *pr* = .14; perceived lack of reinforcement from others for committing sexually aggressive acts, β = .10, *SE* β = .03, *t*(240) = 3.12, *p* < .01, pr = .20; and perceptions of peers' lack of rape supportive attitudes and behaviors, β = .44, *SE* β = .17, *t*(240) = 2.57, *p* < .05, *pr* = .16. The final model with T2 "self" and "other" variables accounted for 17.6% of the variance in prosocial bystander behavior at T3, *F*(5, 238) = 11.40, *p* < .001. Significant predictors of prosocial bystander behavior at T3 included T2 personal discomfort with sexism, *t*(238) = 4.02, *p* < .001, *pr* = .25, and personal lack of involvement in inappropriate sexual dating behaviors, *t*(238) = 2.45, *p* < .05, *pr* = .16. These relationships were such that individuals who were less comfortable with sexist remarks and behaviors and who engaged in fewer inappropriate sexual dating behaviors at T2 engaged in greater prosocial bystander behavior at T3. Table 5 summarizes these results.

Discussion

The purpose of the current study was to prospectively examine college men's perceptions of their peers' and their own attitudes and behaviors toward sexual aggression as predictors of both (a) prosocial bystander behavior intentions and (b) actual prosocial bystander behavior performed. Interestingly, results from the present study indicate that actual prosocial bystander behavior is predicted by different variables than are intentions to engage in future prosocial bystander behavior. First, when examining men's intentions to engage in prosocial bystander behavior, as predicted by social

norms theory and consistent with previous research (e.g., Brown & Messman-Moore, 2010; Stein, 2007), both perceptions of peers' attitudes and behaviors and men's own attitudes and behaviors were consistently predictive. Specifically, when the impact of "self" and "other" variables was examined together, men's own rape supportive attitudes and behaviors and men's perceptions of peers' intentions to engage in bystander behavior were both consistently predictive of intentions to engage in future prosocial bystander behavior, and prior prosocial bystander behavior was related to future prosocial bystander behavior at T1 and T3, thus confirming previous research on the role of self and perception variables in predicting bystander intentions.

In the case of actual bystander behavior, when both men's own attitudes and behaviors and their perceptions of their peers' attitudes and behaviors were included together in the present analyses, men's own comfort with sexism was the only variable that consistently predicted men's self-reported prosocial bystander behavior in both cross-sectional and prospective analyses. Although comfort with sexism has been previously found to be positively related to prospective prosocial bystander behavior (Banyard, 2008), prior literature has found men's perceptions of their peers' attitudes and behaviors to be a stronger predictor of willingness to engage in prosocial bystander behavior than men's own attitudes and behaviors (e.g., Brown & Messman-Moore, 2010). One explanation for these discrepant findings may be that one's own personal attitudes and beliefs are likely to be highly influenced by one's peer group and vice versa. This explanation is supported by the correlations between men's own attitudes and beliefs and men's peers' attitudes and beliefs found in this study (see Table 3). This is not to say that the attitudes and beliefs of men's peer groups are not important, as the analyses with only "other" variables also yielded significant predictors of men's prosocial bystander behavior, but that this influence may operate indirectly with perceived norms influencing self variables which in turn impact future bystander behavior. This interpretation is consistent with literature reporting that men's feelings about themselves are strongly influenced by how they perceive their peers (Berkowitz, 2011).

Thus, interestingly, in the present study, men's perceptions of their peers' attitudes and behaviors were more strongly predictive of men's intentions to engage in future prosocial bystander behavior than their own past engagement in prosocial bystander behavior. Specifically, consistent with social norms theory (Berkowitz, 2010), men's intentions to engage in prosocial bystander behavior seem to be a function of their perception of their peers' willingness to engage in prosocial bystander behavior, but their actual bystander behavior is predicted most strongly by personal discomfort with sexism.

Findings from the current study indicate that perceptions of others' behavior may contribute to bystander behavior, but do not consistently and directly relate to bystander behavior. This seems to contradict a basic tenet of social norms theory—that perceptions predict behavior. However, there are a few possible explanations for this discrepancy. First, it may be that for bystander behavior, which requires intervening against others as opposed to changing one's own actions, the "tipping point" for action is greater and that perceptions alone are not enough to influence acting against others. The relative influence of perceived norms on changing one's own behavior versus

attempting to change the behavior of others is an important issue that needs to be examined further in future research. Second, it is possible that, consistent with the theory of planned behavior (Ajzen, 1985), in which the components of engaging in a target behavior are a function of intentions to engage in behavior, subjective norms, attitudes, and perceived behavioral control, it may be that subjective norms are the weakest predictor of the actual engagement in behavior (Armitage & Conner, 2001): Personal attitudes may be more consistent or important predictors of behavior than subjective norms. If so, variables such as personal attitudes and perceived behavioral ability to intervene may be more important predictors than subjective norms alone when considered concurrently. Third, it is possible that social norms have not been studied adequately in this or other prior research. For example, social norms research differentiates injunctive (i.e., attitudinal, "What I think my friends should do") as opposed to behavioral norms ("What I think my friends actually do"). Although the current study examined a combination of perceptions of others' behavioral and attitudinal norms, it is possible that one type of norm may more strongly influence behavior. As such, measuring injunctive and behavioral norms separately may be more beneficial.

Another notable finding within the prediction of men's actual engagement in prosocial bystander behavior is that men's beliefs about their own or others' sexual or dating behaviors seem to impact their engagement in intervention. More specifically, men's perceptions of peer engagement in inappropriate sexual dating behavior at T1 predicted lower prosocial bystander behavior among participants at T2. Likewise, higher endorsement of one's own inappropriate sexual dating behaviors at T2 was predictive of lower engagement in prosocial bystander behavior at T3. Thus, men who perceive other men as engaging in inappropriate behaviors, or who engage in them personally (e.g., encouraging women to drink to obtain sex), have less motivation to intervene against these behaviors. As such, it may be that men who engage in inappropriate dating behaviors, or perceive that their peers do, do not believe that such behaviors are inappropriate and are consequently not worthy of intervention (Dardis, Kelley, Edwards, & Gidycz, 2011). As a result, men's programs should focus on changing these attitudes such that one might view such behaviors as inappropriate and in turn increase the likelihood of intervention and decrease further perpetration of sexually aggressive behaviors. As applied to the five barriers to bystander intervention proposed by Burn (2009) and based on the five steps to bystander intervention explained by Latané and Darley (1968), male bystanders may not suffer from a failure to notice the potentially sexually assaultive events, but rather a failure to identify such situations as high risk/problematic or a failure to take responsibility for preventing such assaults. By changing attitudes, men may not suffer from such barriers.

This study was the first to prospectively examine both personal attitudes and behaviors and perceptions of peers' attitudes and behaviors to predict both men's intentions to engage in prosocial bystander behavior and their actual reported prosocial bystander behavior. However, some limitations apply. First, this study was limited in that we only assessed prosocial bystander behavior in college men, whereas both men and women can act as prosocial bystanders in sexually assaultive situations. In fact, Banyard (2008) found that college women reported more prosocial bystander behavior

than did their male peers. Although men's own attitudes and behaviors were more strongly related to bystander behavior in the current study, it held true that men are influenced by their peers as well. As such, future research should attempt to address the potential moderating relationship of peer influence on bystander behavior through prospective design and modeling. In addition, as discussed above, men's intentions to engage in prosocial bystander behavior were not predictive of actual behavior. Thus, it is likely that despite good intentions, situational variables may be a more salient predictor of men's actual prosocial bystander behavior. As such, future research should examine social norms variables as well as situational variables (e.g., perceived behavioral control, barriers to intervention) as predictors of prosocial bystander behavior of men and women. Furthermore, it is important for future research to include a measure of past victimization in the assessment of men's own attitudes and behaviors as willingness to engage in prosocial bystander behavior is likely related to one's own history of victimization and/or exposure to assault (e.g., Banyard et al., 2004). In addition, there are some limitations in the present study due to the measure used to assess prosocial bystander behavior. Another possible limitation within the present study is that the measure of bystander behavior used does not include any measure of whether participants actually had the opportunity to engage in such behavior. After careful review of existing sexual assault-specific bystander research, the authors found that the lack of opportunity is consistent across the extant literature in this area. Thus, future research should examine whether or not participants engaged in prosocial bystander behavior given that the opportunity to do so had presented itself as it is possible that the reason prior bystander behavior failed to predict prospective bystander behavior was due to a lack of opportunity to engage in such behavior over the prospective time frame. This study is limited by the fact that social norms variables were assessed using solely men's perceptions of peers' attitudes and behaviors. Although there is a large body of evidence to suggest that men's perceptions of attitudes and behaviors of their peers affect men's sexually aggressive behavior (e.g., Berkowitz, 2005), few studies have compared men's perceptions of peers' attitudes and behaviors with peers' reports of their own attitudes and behaviors. Thus, it may be important for future research to examine actual peer norms in addition to men's perceptions of peer norms.

Findings from the current study have important implications for sexual assault prevention programming. Sexual assault prevention programs with a specific focus on prosocial bystander intervention are important given that the majority of men are not perpetrators of sexual assault (Loh et al., 2005). Therefore, targeting men as prosocial bystanders in the fight against sexual assault may be a very meaningful and engaging form of prevention of sexual assault. The results from the current study also highlight the need for further evaluation of men's sexual assault prevention programming to determine the most effective components. Existing men's prevention programming aims to address men's misperceptions of social norms related to sexually aggressive behaviors (e.g., Kilmartin, Smith, Green, Heinzen, Kuchler, & Kolar, 2008). Although the prevalence of such misperceptions has been well documented in the empirical literature, the findings from the current study suggest that it is important for programmers to incorporate both (a) elements which

address misperceptions of social norms and (b) elements specific to personal attitudes and behaviors, as men's own attitudes may in fact be more predictive of prosocial bystander behavior than are men's perceptions of the attitudes and behaviors of their peers. In addition, as such programming continues to be developed and enhanced, systematic program evaluation will be integral to the implementation of successful programming initiatives and the reduction of sexual assault.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Preparation of this article was supported by the Centers for Disease Control and Prevention by Grant 1 R49 CE0009239.

References

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11-39). Berlin, Germany: Springer-Verlag.

Ajzen, I., Brown, T. C., & Carvajal, F. (2004). Explaining the discrepancy between intentions and actions: The case of hypothetical bias in contingent valuation. *Personality and Social Psychology Bulletin*, *30*, 1108-1121. doi:10.1177/0146167204264079

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta analytic review. *British Journal of Social Psychology*, *40*, 471-499. doi:10.1348/014466601164939

Banyard, V. L. (2008). Sexual violence: Current perspectives on prevention and intervention. *Journal of Prevention & Intervention in the Community*, *36*, 1-4. doi:10.1080/1085235080222225

Banyard, V. L., Plante, E. G., & Moynihan, M. M. (2004). Bystander education: Bringing a broader community perspective to sexual violence prevention. *Journal of Community Psychology*, *32*, 61-79. doi:10.1002/jcop.10078

Berkowitz, A. D. (2002). Fostering men's responsibility for preventing sexual assault. In P. Schewe (Ed.), *Preventing violence in relationships* (pp. 163-196). Washington, DC: American Psychological Association. doi:10.1037/10455-007

Berkowitz, A. D. (2005). An overview of the social norms approach. In L. C. Lederman & L. P. Stewart (Eds.), *Changing the culture of college drinking: A socially situated health communication* (pp. 193-214). Cresskill, NJ: Hampton Press.

Berkowitz, A. D. (2010). Fostering healthy norms to prevent violence and abuse: The social norms approach. In K. L. Kaufman (Ed.), *The prevention of sexual violence: A practitioner's sourcebook* (pp. 147-171). Holyoke, MA: NEARI Press.

Berkowitz, A. D. (2011). Using how college men feel about being men and "doing the right thing" to promote men's development. In J. A. Laker & T. Davis (Eds.), *Masculinities in higher education: Theoretical and practical considerations* (pp. 161-176). New York: Routledge.

Boeringer, S. B., Shehan, C. L., & Akers, R. L. (1991). Social contexts and social learning in sexual coercion and aggression: Assessing the contribution of fraternity membership. *Family Relations*, *40*, 58-64. doi:10.2307/585659

Brown, A. L., & Messman-Moore, T. L. (2010). Personal and perceived peer attitudes supporting sexual aggression as predictors of male college students' willingness to intervene against sexual aggression. *Journal of Interpersonal Violence*, *25*, 503-517. doi:10.1177/0886260509334400

Bruner, J. (2002). Measuring rape supportive attitudes, behaviors, and perceived peer norms among college men: Validation of a social norms survey. *Dissertation Abstracts International, Section B: The Sciences and Engineering*, *63*(7-B), 3466.

Burn, S. M. (2009). A situational model of sexual assault prevention through bystander intervention. *Sex Roles*, *60*, 779-792. doi:10.1007/s11199-008-9581-5

Carlson, M. (2008). I'd rather go along and be considered a man: Masculinity and bystander intervention. *Journal of Men's Studies*, *16*, 3-17. doi:10.3149/jms.1601.3

Dardis, T. M., Kelley, E. L., Edwards, K. M., & Gidycz, C. A. (May, 2011). *Men's perceptions of/and attitudes toward violence and sexually aggressive behavior*. Paper presented at the meeting of the Midwestern Psychological Association, Chicago, IL.

DeKeserdy, W. S. (1990). Male peer support and woman abuse: The current state of knowledge. *Sociological Focus*, *23*, 129-139. doi:10.1080/00380237.1992.10570559

Ewing, J. A. (1984). Electric aversion and individualized imagery therapy in alcoholism: A controlled experiment. *Alcohol*, *1*, 101-104. doi:10.1016/0741-8329(84)90063-6

Fabiano, P. M., Perkins, W., Berkowitz, A., Linkenback, J., & Stark, C. (2003). Engaging men as social justice allies in ending violence against women: Evidence for a social norms approach. *Journal of American College Health*, *52*, 105-112. doi:10.1080/07448480309595732

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Gidycz, C. A., Orchowski, L. M., & Berkowitz, A. D. (2011). Preventing sexual aggression among college men: An evaluation of a social norms and bystander intervention program. *Violence Against Women*, *17*, 720-742. doi:10.1177/1077801211409727

Hamburger, M. E., Hogben, M., McGowen, S., & Dawson, L. J. (1996). Assessing hypergender ideologies: Development and initial validation of a gender-neutral measure of adherence to extreme gender-role beliefs. *Journal of Research in Personality*, *30*, 157-178. doi:10.1006/jrpe.1996.0011

Kilmartin, C. T., Conway, A., Friedberg, A., McQuiod, T., Tschan, P., & Norbet, T. (1999). *Using the social norms model to encourage male college students to challenge rape supportive attitudes in male peers*. Paper presented at the Virginia Psychological Association Spring Conference, Virginia Beach.

Kilmartin, C. T., Smith, T., Green, A., Heinzen, H., Kuchler, M., & Kolar, D. (2008). A real time social norms intervention to reduce male sexism. *Sex Roles*, *59*, 264-273. doi 10.1007/s11199-008-9446-y

Koss, M. P., & Gidycz, C. A. (1985). Sexual Experiences Survey: Reliability and validity. *Journal of Consulting and Clinical Psychology*, *53*, 422-423. doi:10.1037/0022-006X.53.3.422

Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology*, *55*, 162-170. doi:10.1037/0022-006X.55.2.162

Koss, M. P., & Oros, C. J. (1982). Sexual Experiences Survey: A research instrument investigating sexual aggression and victimization. *Journal of Consulting and Counseling Psychology*, *50*, 455-457. doi:10.1037/0022-006X.50.3.455

Latané, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10*, 308-324.

Loh, C., Gidycz, C. A., Lobo, T. R., & Luthra, R. (2005). A prospective analysis of sexual assault perpetration: Risk factors related to perpetrator characteristics. *Journal of Interpersonal Violence*, *20*, 1325-1348. doi:10.1177/0886260505278528

Loh, C., Gidycz, C., Lobo, T., & Luthra, R. (2001, November). *Support for an integrative model of sexual assault perpetration and acquaintance rape.* Paper presented at the meeting for the Advancement of Behavior Therapy, Philadelphia, PA.

McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health*, *59*, 3-11. doi:10.1080/07448481.2010.483715

McMahon, S., & Farmer, G. L. (2009). The bystander approach: Strengths-based sexual assault prevention with at-risk groups. *Journal of Human Behavior in the Social Environment*, *19*, 1042-1065. doi:10.1080/10911350902990304

Saunders, J. B., Aasland, O. G., Baror, T. F., De la Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption–II. *Addiction*, *88*, 791-804. doi:10.1111/j.1360-0443.1993.tb02093.x

Stein, J. L. (2007). Peer educators and close friends as predictors of male college students' willingness to prevent rape. *Journal of College Student Development*, *48*, 75-89. doi:10.1353/csd.2007.0008

Turchik, J. A., Probst, D. R., Irvin, C. R., Chau, M., & Gidycz, C. A. (2010). Prediction of sexual assault experiences in college women based on rape scripts: A prospective analysis. *Journal of Consulting and Clinical Psychology*, *77*, 361-366. doi:10.1037/2152-0828.1.S.76

Author Biographies

Megan J. Murphy Austin, PhD, completed her graduate degrees in clinical psychology at Ohio University and clinical internship at Miami University Student Counseling Service. She is currently working as a clinical psychologist at Woodland Centers, Inc., an outpatient mental health agency in Pomeroy, Ohio. She has worked on a number of projects pertaining to sexual assault correlates and preventive strategies, such as bystander intervention.

Christina M. Dardis, MS, is a doctoral student in clinical psychology at Ohio University. Specific research interests include social norms approaches to sexual assault prevention, predictors and correlates of sexual assault and intimate partner violence victimization and perpetration, sexual assault acknowledgment, disclosure of sexual assault and intimate partner violence experiences and social reactions to these disclosures, and stalking and the use of technology to perpetrate intimate partner violence.

Milo S. Wilson, PhD, is currently working as a clinical psychologist at the Chalmers P. Wylie VA ACC in Columbus, Ohio. He previously completed apostdoctoral fellowship at the Clement J. Zablocki VA Medical Center in Milwaukee, specializing in Lesbian, Gay, Bisexual, Transexual (LGBT) veteran health care after completing his PhD at Ohio University. His research has focused on interpersonal violence and transgender health. He is dedicated to professional service in psychology, as he has served as the chair of the American Psychological Association of Graduate Students, as well as on the Board of Directors and Council of Representatives for the

American Psychological Association. He is also passionate about advocacy related to graduate psychology education and LGBT issues.

Christine A. Gidycz, PhD, professor of psychology at Ohio University, Athens, has conducted investigations pertaining to sexual assault correlates and risk factors and factors that contribute to the sexual revictimization of women. She also developed the Ohio University Sexual Assault Risk Reduction Program and has published numerous articles and book chapters addressing sexual assault issues.

Alan D. Berkowitz, PhD, is an independent consultant with expertise in culture change, behavioral health, and promoting social justice. He has received five national awards for his scholarship and innovative programs on substance abuse and sexual assault prevention, men's role in ending violence against women, gender issues, bystander intervention theory and skills, and diversity. He is a frequent keynote speaker at national conferences, a cofounder of the social norms approach, and an author of a book on bystander behavior, and he serves as a sexual assault prevention subject matter expert for all five branches of the U.S. military.