

Preventing Sexual Aggression among College Men: An Evaluation of a Social Norms and  
Bystander Intervention Program

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### **Abstract**

The present research describes one arm of the Community Programming Initiative, a dual-pronged sexual assault prevention effort ( $N = 1285$ ). Men and women living in randomly selected 1<sup>st</sup> year residence halls participated in tailored single-sex sexual assault prevention, or risk reduction programs, respectively. An evaluation of the sexual assault prevention program for men is presented ( $N = 635$ ). The program utilized an integrative model of sexual assault incorporating social norms and bystander intervention education. The program had an impact on self-reported sexual aggression, with men receiving the intervention self-reporting that they were less likely than men in the control group to engage in sexually aggressive behavior over the 4-month follow-up. The program also had a positive effect on men's perceptions that their peers would intervene when they encountered inappropriate behavior in others. Relative to the control group, participants also reported less reinforcement for engaging in sexually aggressive behavior, reported fewer associations with sexually aggressive peers and indicated less exposure to sexually explicit media.

**KEYWORDS:** Sexual Assault Prevention, Sexual Aggression, Program Evaluation

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Sexual assault is pervasive on college campuses across the United States, with large scale surveys of college women indicating that approximately 12% have experienced a rape (Kilpatrick, Resnick, Rugiero, Consosecenti, & McCauley, 2007). Between 11% - 28% of college women have been sexually assaulted over brief 2-3 month intervals (Gidycz, Orchowski, King, & Rich, 2008; Rich, Gidycz, Warkentin, Loh, & Weiland, 2005; Turchik, Probst, Chau, Nigoff, & Gidycz, 2007). Estimates of sexual assault perpetration garnered from men are substantially lower than those provided by women; however, the extent of men's self-reported sexual aggression is also alarming (Gidycz, Warkentin, Orchowski, & Edwards, in press). College men's self-reported perpetration of sexually aggressive acts suggest incidence rates between 10% (Gidycz, Warkentin, & Orchowski, 2007) to 17% (Loh, Gidycz, Lobo, & Luthra, 2005) over a 3-month period and approximately 35% over a 4-year period (White & Smith, 2004). Given that a very small group of men commit the majority of these assaults (Lisak & Miller, 2002), it is crucial that prevention efforts take into account the fact that a majority of assaults are perpetrated by a minority of men.

Despite federal mandates to provide prevention programming on college campuses (National Association of Student Personnel Administrators, 1994), there remains a dearth of program outcome evaluations demonstrating the effectiveness of sexual violence prevention efforts. Experts have highlighted the need for sound theories to guide programming efforts (see Gidycz, Orchowski, & Edwards, in press) with recommendations that programs target single-gender audiences. The program goals for men's and women's programming do not overlap

(Gidycz, Rich & Marioni, 2002) and fears of embarrassment make it difficult for men to openly discuss their attitudes with women present (Berkowitz, 1994; Berkowitz, 1992). Yet the vast majority of published outcome evaluations report on mixed-gender programs (for reviews, see Anderson & Whiston, 2005; Morrison, Hardison, Mathew, & O'Neil, 2004).

In response to these critiques, researchers have developed and evaluated programs geared towards single-gender audiences (Gidycz et al., in press). Programs that target the behavior of potential perpetrators (i.e., men) are described as rape prevention programs, and programs geared towards reducing a woman's risk for victimization are described as risk reduction programs (Lonsway et al., 2009). More recently, bystander interventions have been implemented to single-gender groups, based on the premise that all members of a community are affected by violence, and therefore, must be involved in dispelling the social norms that perpetuate violence against women (Edwards, Jumper-Thurman, Plested, Oetting, & Swanson, 2000). Bystander approaches teach individuals skills to take action and to intervene when witnessing risky peer behavior (Banyard, Plante, & Moynihan, 2004), and are appropriate for male audiences given that most men do not perpetrate but are in a position to prevent perpetrations committed by the minority of men.

Increasingly, there are some limited data to support the effectiveness of sexual assault prevention, risk reduction, and bystander intervention programs (for reviews see Gidycz et al., in press; Lonsway et al., 2009; Orchowski, Gidycz, & Murphy, 2010). Prevention programs account for only 8% of programs and demonstrate modest success in terms of attitude change regarding rape (e.g., Morrison et al., 2004). Evaluations of risk reduction programs present mixed findings, with some data demonstrating decreases in victimization and revictimization (Gidycz et al., 2001; Orchowski, Gidycz, & Raffle, 2008), increases in self-protective behaviors

(Gidycz, Rich, King, Orchowski, & Miller, 2006; Orchowski et al., 2008), resistance self-efficacy, and assertive sexual communication (Orchowski et al., 2008). Bystander interventions have also shown promise as a potentially effective intervention. For example, a program by Banyard, Moynihan, and Plante (2007) was effective in decreasing rape myths, increasing sexual assault knowledge, prosocial bystander attitudes, and confidence intervening in a threatening situation. Program participants were also more likely than the control group to engage in prosocial bystander behavior over a 2-month follow-up. Despite all of the above, it has been concluded that programming efforts have generally not been successful in reducing sexual violence on college campuses (Lonsway et al., 2009). The lack of program effectiveness is not surprising given that programs are often brief and, with few exceptions (see Foubert & Perry, 2007; Gidycz et al., 2006; Orchowski et al., 2008), evaluations have not addressed program impact on rates of self-reported victimization or perpetration. Previous studies have also been limited by non-random assignment of participants to program and control groups, small sample sizes, and short follow-up assessment intervals (Gidycz et al., 2002).

In light of all the above, it is necessary to improve the development of individual-level prevention and risk reduction programs (Gidycz et al., in press). Specifically, it is important to develop programs that are theoretically-driven and expand prevention efforts beyond the individual level to engender community and societal change (Gidycz et al., in press). Berkowitz (2003) and others (Banyard et al., 2007) point to the importance of social and community norms as a significant cause of sexual violence. Given that a person's decision to intervene in a risky dating situation is related to the extent that they believe others in their immediate environment would support them and share their concerns (Berkowitz, 2010), peer influences are considered to be a particularly important factor in shaping behavior change. Problematically, most

prevention programming has targeted groups of men who are not members of a cohesive group and who may therefore not be able to influence each other to change. As such, prevention efforts may be more effective when they take place in the context of cohesive peer groups where men are more likely to interact on an ongoing basis. It therefore follows that an essential component of evaluating the efficacy of preventative efforts is to close the gap between traditional research settings (i.e., classrooms) and the natural social environments (i.e., residence halls and fraternities) where sexual aggression is likely to occur.

Sexual assault risk reduction and prevention programs can be further improved by ensuring that both men and women are included in prevention efforts, but receive appropriately targeted information. However, researchers have yet to examine the effectiveness of concurrent implementation of men's and women's programs in a college or community setting. Such a two-pronged approach would provide women with the risk reduction skills necessary to protect against sexual assault amidst concurrent prevention efforts with men to reduce perpetration. It may be that intervention goals common to both men's and women's programs, such as increasing sexual communication, are best addressed by such parallel intervention efforts.

The present investigation was designed to evaluate the effectiveness of administering a theoretically-driven prevention program for men and a risk reduction program for women to college students living within the same campus community. We hypothesized that concurrent administration of both programs within intact groups of students, such as residence hall floors, would reduce sexual aggression by promoting a broader systemic change within the community. First-year dormitories were randomly assigned to either participate in the treatment or control groups. Men and women living in the treatment dorms were offered either the prevention or risk

reduction program, respectively. The interventions were advertised as the “Community Programming Initiative”.

The present study provides results for the men’s program. A companion paper describes the women’s program and its outcomes (Gidycz, Orchowski, Probst, Edwards, Murphy, & Tansill, 2010). For the men’s program ( $N = 635$ ), assessments occurred at pre-test, 4-month, and 7-month follow-ups. A wide range of outcome measures were administered, including a survey of self-reported sexual aggression. The program implemented with men was developed by Berkowitz (1994), revised in conjunction with Gidycz and colleagues (Berkowitz, Lobo, & Gidycz, 2000), and further refined for the current study (Berkowitz, Lobo, Gidycz, Robison, & Zimak, 2006). *The Men’s Program* is based on an integrative model of sexual assault (Berkowitz, 1992) and incorporates a social norms model of change with discussion of intervention techniques for bystanders.

It was hypothesized that men in the intervention group would demonstrate positive changes that would be maintained over the follow-up periods in comparison with the control group. Specifically it was hypothesized that program group men would evidence: (a) lower rates of sexual aggression; (b) better scores on measures of rape attitudes and sexism; (c) increased understanding of consent; (d) greater discomfort with other men's behavior in ways that are consistent with appropriate norms regarding sexual behavior; (e) more engagement in prosocial behavior, including indicating support for violence prevention efforts and intervening when observing inappropriate behavior by peers; and (f) more accurate perceptions of other men's social and sexual behavior. In light of research suggesting that interventions are differentially effective for sexually aggressive men (Schewe & O’Donohue, 1993), analyses were also conducted to explore whether program effectiveness was related to history of sexual aggression.

## Method

### Participants

Participants were recruited from 1<sup>st</sup> year student campus residence halls ( $N = 1285$ ) at a medium-sized Midwestern university. It is estimated that 57.3% ( $N = 1285$ ) of the possible 2243 students that were eligible for the study chose to enroll. A total of 635 men volunteered to participate. No participants were omitted prior to analyses due to missing data. The majority were 18- or 19-years old (98%,  $N = 622$ ) and in their 1<sup>st</sup> year of school (98.1%,  $N = 618$ ). The vast majority self-identified as unmarried (98.7%,  $N = 627$ ) and heterosexual (98.1%,  $N = 618$ ). Consistent with university demographics, 91.8% of participants identified as Caucasian ( $N = 583$ ), 5% as African American ( $N = 32$ ), 1.7% as Asian ( $N = 11$ ), 0.2 % as Native Hawaiian or Pacific Islander ( $N = 1$ ), 0.3% as American Indian or Alaska Native ( $N = 2$ ), and 0.9% as “other” ( $N = 6$ ). Further, 2.5% ( $N = 16$ ) reported their ethnicity as Hispanic or Latino.

### The Sexual Assault Prevention Program

Men in the program completed a 1 ½ - hour prevention program and a 1-hour booster session. The workshop protocol (Berkowitz, 1994) has sustained evaluation in two prior studies (Davis, 1997, 2000; Earle, 1996), and was refined (Berkowitz et al., 2000) and further updated for the present study (Berkowitz et al., 2006). The program is grounded in theory and empirical data regarding risk for sexual aggression and incorporates various elements including: an empathy induction, a norms correction component, a discussion of consent, and a bystander intervention component. The program is based on the Integrated Model of Sexual Assault, which proposes that a perpetrator's attitudes, beliefs, socialization and peer group relationships

determine the conditions in which he would be willing to perpetrate or justify a sexual assault (Berkowitz, 1992, 2003). Misperceptions of the extent to which peers endorse rape myths and are sexually active also serve to pressure men to be sexually active and to suppress discomfort with other men's behavior (Berkowitz, 2010). These elements serve as heuristics in a perpetrator's decision making, resulting in potentially biased processing in sexual situations (Burkhart & Fromuth, 1991). Situational variables (i.e., alcohol) also serve as triggers, leading a perpetrator to misinterpret or ignore his partner's wishes or to underestimate the extent to which his peers are feeling uncomfortable about his behavior (Berkowitz, 2002a).

The program design allows men to talk about their frustrations regarding dating situations and their experiences as men on campus. An opportunity to "vent" engages men in the task of preventing sexual assault and clears the air of frustrations in a way that allows for deeper processing of and receptivity to the material. Three strategies were utilized to promote change in men's understanding of masculinity, consent in dating relationships, and awareness of the norms and misperceptions that foster a rape-supportive culture. The first strategy fosters empathy regarding sexual assault and rape by providing men with the opportunity to describe the impact of sexual assault on women in their lives, and discuss alternative explanations for men's perceptions of false accusations of assault. Discussions also are designed to facilitate empathy by focusing on the debunking of rape myths. The second change strategy increases awareness about conditions of consent (see Berkowitz, 2002b). Definitions of consent are discussed and operationalized in the context of specific scenarios. The third change strategy aims to foster bystander intervention and resocialization. Campus-wide and participant data are presented on men's discomfort with the inappropriate behavior and language of other men. An adaptation of the Small Group Norms Correction Intervention, developed to reduce high-risk drinking (i.e., Far

& Miller, 2003), is utilized to correct men's misperceptions of other men's attitudes and behaviors with respect to sexual assault. Data on true norms among men and the sharing of personal experiences by participants serve to undermine traditional conceptions of masculinity that are associated with rape proclivity (i.e., risk factors). Such discussions also validate healthier alternatives (i.e., protective behaviors). Men are also encouraged to share their discomfort with aspects of the male gender role script, which in turn allows men to critique it and discuss alternatives that are more positive and normative. The bystander behavior module, which includes an interactive exercise, encourages the majority of non-assaultive men to intervene in the behavior of the minority in order to change the campus context from one that supports coercive behavior to one that inhibits it.

Men participate in a booster session review of program material approximately 4 months following initial program participation where conditions for consent are reviewed, normative data are provided, and bystander intervention strategies are discussed. Men also discuss in small groups whether they have been able to utilize program content over the interim. Following this, they present the discussion topics from their small groups to the larger group.

### **Procedure**

All procedures were approved by the university IRB and participants gave written informed consent prior to enrollment. Programming took place over a two year period. Six 1<sup>st</sup> year residence halls were randomly selected each year to participate in the study for a total of twelve residence halls. Halls were randomly assigned to program or wait-list control groups. To create comparable sample sizes across program and control groups, residence halls were matched according to size, such that two small, medium and large-sized halls were selected and randomized to either condition. Men and women living in program group residence halls were

offered separate sexual assault interventions, and students living in control group residence halls completed questionnaires.

Programs were manualized and administered concurrently in separate locations for men and women. The team of program facilitators consisted of four undergraduate students and two doctoral psychology students, with two trained male facilitators conducting each program session. Training included between 20-25 hours of didactic learning, discussion, role plays and supervised administration of the protocol. Supervision was provided throughout the study from the authors of this manuscript. To assess facilitators' adherence to the protocol, 25% of the interventions were evaluated by a trained male research assistant; indicating that the intervention was administered in a consistent manner according to protocol.

Following the baseline assessment, participants completed the sexual assault prevention program. At the 4-month follow-up, men completed outcome assessments, including their self-reported experiences of sexual aggression over the interim period. After completing the follow-up assessments, program participants attended a booster session review of program material. At the 7-month follow-up assessment, both program and control groups completed outcome assessments. Control group participants received \$20 for completing questionnaires at each session while program group members received \$40 for the baseline assessment and program, \$30 for the 4-month follow-up and booster session, and \$20 for completing questionnaires at the 7-month follow-up.

### **Measures and Aims**

Evaluation measures were matched to program goals and outcomes. Measures corresponding to each of these goals are described below.

**Aim 1: To decrease rape myth acceptance and negative attitudes towards women.**

***Rape myth acceptance.*** The short form of the Illinois Rape Myth Acceptance Scale (Payne, Lonsway, & Fitzgerald, 1999) assesses general rape myth acceptance. Participants respond to 20 items marked on a 7-point scale, with higher scores indicating greater endorsement of rape myths. The scale is correlated with the long-form of the scale and measures of sex role stereotypes and adversarial heterosexual beliefs (Payne et al., 1999). Cronbach's alpha was .80.

***Hypergender ideology.*** The short form of the Hypergender Ideology Scale (Hamburger, Hogben, McGowen, & Dawson, 1996) assesses stereotypical gender roles. Participants respond to 19 items along a 6-point scale, with higher scores indicating greater endorsement of hypergender ideology. The scale demonstrates good concurrent validity when compared to the Hypermasculinity Inventory ( $r = .55$ ; Hamburger et al., 1996). Cronbach's alpha was .87.

**Aim 2: Increase the accuracy of men's perceptions of other men's attitudes and behaviors.**

***Peer disapproval for sexual aggression.*** The Differential Reinforcement subscale of the Social Norms Measure (Boeringer, Shehan, & Akers, 1991) assessed men's perception that their peers disapproved of sexual aggression. Higher scores indicate greater perceived peer disapproval of sexually aggressive behavior. Cronbach's alpha for the subscale was .66.

***Peer engagement in bystander intervention.*** The Sexual Social Norms Inventory (Bruner, 2002) examines normative attitudes and behaviors related to sexual assault. Participants respond to 60 self-report items along a 5-point scale. To measure perceived peer engagement in bystander behavior, participants completed the Bystander Intervention subscale of this inventory. Higher scores indicate greater perceived peer use of prosocial bystander behaviors. The scale

correlates with the College Date Rape Attitude and Behavior Survey (Lanier & Elliott, 1997). Cronbach's alpha for the subscale was .84.

**Aim 3: Create more appropriate norms regarding sexually aggressive behavior.**

*Association with aggressive peers.* The Association with Aggressive Peers subscale of the Social Norms Measure (Boeringer et al., 1991) assesses the extent to which peers engage in sexually aggressive behavior with higher scores indicating greater association with aggressive peers. Cronbach's alpha for the subscale was .66.

*Modeling of aggressive behavior.* The Modeling subscale of the Social Norms Measure (Boeringer et al., 1991) examines modeling of sexual aggression via exposure to violent media and pornography, with higher scores indicating greater exposure to aggressive behavior. Cronbach's alpha for the subscale was .71.

*Reinforcement for aggression.* Overall pleasure engaging in sexual aggression (i.e., reinforcement) was assessed through the Overall Reinforcement subscale of the Social Norms Measure (Boeringer et al., 1991), with higher scores indicating more pleasure in engaging in sexually aggressive behavior. Cronbach's alpha for the subscale was .72.

**Aim 4: Increase prosocial bystander behavior and support for victims.**

*Personal engagement in bystander intervention.* The Bystander Intervention subscale of the Sexual Social Norms Inventory (Bruner, 2002), which examines personal engagement in bystander behavior, was used to assess men's likelihood to intervene when witnessing inappropriate dating situations. Higher scores indicate a greater likelihood to intervene. Cronbach's alpha for the subscale was .82.

*Support for rape prevention efforts.* Men's willingness to support sexual assault advocacy services was assessed through an anonymous telephone survey, in which participants

were asked if they would support an increase in the student activity fee to support various campus activities. This behavioral measure included questions addressing support for various campus organizations, with one question assessing if participants would support a fee increase to improve rape prevention efforts. Undergraduate assistants who were blind to the purpose of the survey called program and control group participants from a de-identified list of phone numbers.

**Aim 5: Increase understanding of consent.**

*Accurate identification of rape scenarios.* Two scenarios depicting the perpetration of different forms of sexual aggression (Pinzone-Glover, Gidycz, & Jacobs, 1998) were included to assess participants' understanding of consent. After reading each scenario, participants rated on a 10-point scale the extent to which they considered the experience to be rape, ranging from 1 (*consensual sex*) to 10 (*rape*). Scenario I describes a dating couple, in which kissing and touching escalates to unwanted sexual intercourse through verbal coercion, despite active verbal and physical resistance from the woman. Scenario II describes a couple with a prior history of engaging in sexual intercourse, in which kissing and touching escalates to unwanted sexual intercourse through verbal coercion, despite the victim's verbal resistance and "turning cold". Past research with these scenarios indicated that men in a coed rape prevention program were better able than men in the non-intervention control group to identify them as depicting rape following the intervention (Pinzone-Glover et al., 1998).

**Aim 6: Decrease perpetration of sexual aggression.**

*Assessment of sexual aggression.* The Sexual Experiences Survey (SES; Koss & Oros, 1982) is a 10-item self-report survey that assesses sexually aggressive behavior, along a continuum ranging from forced sexual touching to rape. For descriptive purposes, levels of sexual assault were defined as follows: (a) no sexual aggression (no items endorsed); (b)

moderate sexual aggression (i.e., endorsement of items assessing sexually aggressive behavior other than rape, including forced sexual contact, sexual coercion, and attempted rape; and (c) severe sexual aggression (i.e., rape, whereby physical force or threats of force were used to coerce sexual intercourse, including anal and oral sex). For the purpose of analysis, levels of sexual assault included: (a) no sexual aggression (no items endorsed); and (b) sexual aggression (i.e., moderate or severe sexual aggression). The SES has demonstrated good two week test-retest reliability (Koss & Gidycz, 1985). Men completed the SES at baseline with reference to sexually coercive behaviors from the age of 14 to the baseline assessment. At the 4- and 7-month follow-up assessments, they responded about their experiences with sexually coercive behavior over the respective interim periods. At baseline, Cronbach's alpha was .91.

#### **Supplemental measures.**

*Socially desirable responding.* The short version of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) was given at baseline to assess participants' need to present themselves in a socially desirable manner. Participants respond to thirteen items on a true-false scale that has demonstrated good reliability and validity (Crowne & Marlowe, 1960).

#### **Data Analysis**

Sample characteristics were summarized with means, standard deviations, and percentile estimates. Chi-square and t-test analyses were conducted to examine randomization between groups on baseline characteristics and history of sexual aggression, differential drop out between groups over the 4- and 7-month follow-up assessments, and predictors of attrition. To examine primary study outcomes, a series of 2 x 2 x 3 (Group x History of Perpetration x Time) repeated measures analyses of variance were conducted with significant results indicated by an interaction between time and group status. Tukey's Least Significant Difference Test was used to examine

significant two-way interactions via a simple-main effects analysis. For exploratory purposes, history of sexual aggression was included as a dichotomous independent variable in the analyses as it could influence responses to program outcome measures. Three-way interactions between time, group status, and history of sexual aggression were examined via simple interaction analyses. Specifically, for each group, pairwise comparisons were first conducted to examine how an outcome measure varied over time for men with and without a history of sexual aggression. Next, pairwise comparisons were conducted at each time period to examine how outcome measures varied between program and control participants who reported corresponding forms of sexual aggression since adolescence. Additional pairwise comparisons for men in each group examined how outcome variable levels varied at each time period between men with and without a history of sexual aggression. A backward elimination log-linear analysis (Tabachnick & Fidell, 2001) examined the program's efficacy in reducing sexual aggression. A series of post-hoc chi-square analyses were conducted to examine significant interactions in the final model. Descriptive statistics for program outcomes are presented in Table 1. Figure 1, Figure 2 and Figure 3 present the descriptive statistics for any significant three-way interactions.

## Results

### Preliminary Analyses

**Sample characteristics.** Seven-percent ( $N = 46$ ) reported perpetrating acts of sexual aggression from the age of 14 to the baseline assessment. More specifically, 5.2 % ( $n = 33$ ) reported perpetrating acts of moderate sexual aggression (i.e., forced sexual contact, sexual coercion or attempted rape), and 2.0% ( $n = 13$ ) reported perpetrating acts of severe sexual aggression (i.e., rape) in adolescence. Of the 635 men who completed the baseline assessment, 83.4% returned for the 4-month ( $N = 529$ ) and 77.8% returned for the 7-month follow-up ( $N =$

494), with 460 completing baseline, 4- and 7-month follow-up sessions. Chi-square analyses suggested that return rates did not vary between program or control group participants for the 4- or 7-month follow-up.

**Test of randomization.** A series of chi-square analyses were conducted to explore differences in demographic characteristics and history of sexual aggression among program and control group participants at baseline. Analyses revealed program and control group differences for race,  $\chi^2(4, N = 629) = 9.97, p < .05$ , with the program group containing a higher proportion of African American men ( $N = 20, 7.3\%$ ) compared to the control group ( $N = 12, 3.4\%$ ). A series of t-tests were utilized to examine differences between program and control group participants on outcome measures and social desirability at baseline, and the only significant difference was that program men reported a higher likelihood to engage in prosocial bystander behavior at baseline, compared to control group men,  $t(633) = 2.37, p < .05$ .

**Predictors of study completion.** Analyses suggested that program and control group members who did not return for the 4- and 7-month follow-up did not differ from each other on any outcome measure. Analyses were also conducted to examine differences between men who dropped out and men who completed the study. In comparison with 7-month follow-up completers, men who dropped out at the 7-month follow-up indicated higher levels of hypergender ideology when surveyed at the 4-month follow-up,  $t(520) = -2.08, p < .05$ .

### **Program Outcomes**

#### **Aim 1: To decrease rape myth acceptance and negative attitudes towards women.**

Analyses of measures of rape myth acceptance and hypergender ideology did not vary over time as a function of group.

**Aim 2: Increase the accuracy of men's perceptions of other men's attitudes and behaviors.** Analyses of men's perception that their friends would disapprove of aggressive behavior did not demonstrate significant effects. However, analyses of men's perceptions of other men's likelihood to intervene in an inappropriate dating situation evidenced a time by group interaction,  $F(2, 908) = 5.12, p < .01, \text{Cohen's } d = .21$ . Among program participants, men's perception of other men's likelihood to intervene was higher at the 4-month follow-up ( $M = 30.58, SE = 0.80$ ) compared to baseline ( $M = 28.69, SE = 0.79$ ), whereas among control group participants, men's perception of other men's likelihood to intervene was lower at the 7-month follow-up ( $M = 26.87, SE = 0.81$ ) compared to the baseline ( $M = 29.75, SE = 0.76$ ) or the 4-month follow-up ( $M = 29.17, SE = 0.77$ ). At the 7-month follow-up, men's perceptions of other men's likelihood to intervene were higher among program ( $M = 29.49, SE = 0.84$ ) compared to control group participants ( $M = 26.87, SE = 0.81$ ).

Data also indicated a three-way interaction between time, group, and history of sexual aggression,  $F(2, 908) = 3.02, p < .05, \text{Cohen's } d = .16$  (See Figure 1). Sexually aggressive (SA) men in the program group reported increased perceptions of other men's likelihood to intervene from baseline ( $M = 27.03, SE = 1.53$ ) to the 4-month follow-up ( $M = 30.57, SE = 1.54$ ). Non-SA program participants reported lower perceptions of other men's engagement in bystander behavior at the 7-month follow-up ( $M = 29.41, SE = 0.44$ ) compared to baseline ( $M = 30.34, SE = 0.41$ ) and the 4-month follow-up ( $M = 30.59, SE = 0.42$ ). Both SA and non-SA men in the control group reported lower perceptions of other men's likelihood to intervene at the 7-month follow-up ( $M = 25.47, SE = 1.57; M = 28.27, SE = 0.40$ ) compared to baseline ( $M = 29.50, SE = 1.48; M = 30.00, SE = 0.37$ ) or the 4-month follow-up ( $M = 29.07, SE = 1.49; M = 29.27; SE = 0.38$ ). The perceptions of other men's engagement in bystander behavior were higher at 4-

months among non-SA men in the program group compared to non-SA men in the control group. Finally, SA men in the program group reported lower perceptions of other men's bystander behavior at baseline ( $M = 27.03$ ,  $SE = 1.53$ ) compared to non-SA men in the program group ( $M = 30.34$ ,  $SE = 0.41$ ).

**Aim 3: Create more appropriate norms regarding sexually aggressive behavior, including decreasing bystander bias.** Men's perceptions that their friends engaged in sexually aggressive behavior varied over time as a function of program participation,  $F(2, 904) = 4.45$ ,  $p < .05$ , *Cohen's d* = .20. Men in the program reported less association with sexually aggressive peers at the 4-month ( $M = 2.97$ ,  $SE = 0.16$ ) and 7-month follow-up ( $M = 3.03$ ,  $SE = 0.17$ ) compared to baseline ( $M = 3.80$ ,  $SE = 0.18$ ). For the control group, association with sexually aggressive peers was lower at the 7-month assessment ( $M = 2.81$ ,  $SE = 0.16$ ) compared to the baseline ( $M = 3.33$ ,  $SE = 0.18$ ) and 4-month follow-up ( $M = 3.26$ ,  $SE = 0.15$ ).

A significant interaction between time, group, and history of sexual aggression was also documented,  $F(2, 904) = 3.48$ ,  $p < .05$ , *Cohen's d* = .18 (See Figure 2). In the program group, both non-SA and SA men, respectively, reported less association with sexually aggressive peers at the 4-month ( $M = 2.66$ ,  $SE = 0.08$ ;  $M = 3.29$ ,  $SE = 0.30$ ) and 7-month follow-up ( $M = 2.56$ ,  $SE = 0.09$ ;  $M = 3.50$ ,  $SE = 0.33$ ) compared to baseline ( $M = 3.16$ ,  $SE = 0.10$ ;  $M = 4.43$ ,  $SE = 0.35$ ). In the control group, non-SA men also reported less association with sexually aggressive peers at the 4-month ( $M = 2.66$ ,  $SE = 0.07$ ) and 7-month follow-up ( $M = 2.54$ ,  $SE = 0.08$ ) compared to baseline ( $M = 3.06$ ,  $SE = 0.09$ ). In the control group, SA men reported less association with sexually aggressive peers at the 7-month follow-up ( $M = 3.07$ ,  $SE = 0.32$ ) compared to the 4-month follow-up ( $M = 3.87$ ,  $SE = 0.29$ ). Among program participants, association with sexually

aggressive peers was higher among SA men compared to non-SA men at baseline, 4- and 7-month follow-up sessions.

Analyses of exposure to modeling of sexual aggression (i.e., sexually explicit media and books) evidenced significant main effects for time and history of sexual aggression, respectively,  $F(2, 898) = 26.99, p < .001, \text{Cohen's } d = .49$ ;  $F(1, 449) = 7.05, p < .01, \text{Cohen's } d = .25$ . SA men reported more exposure to media and print materials modeling sexual aggression than non-SA men. An interaction between time and group was also revealed,  $F(2, 898) = 5.01, p < .01, \text{Cohen's } d = .21$ . Program participants reported less exposure to explicit materials at the 4-month ( $M = 4.79, SE = 0.30$ ) and 7-month follow-up ( $M = 4.56, SE = 0.27$ ) compared to baseline ( $M = 6.77, SE = 0.37$ ). Program participants reported higher baseline levels of exposure to explicit media compared to control group participants. Control group men also reported less exposure to explicit materials at the 7-month follow-up ( $M = 4.39, SE = 0.26$ ), compared to the 4-month ( $M = 5.20, SE = 0.29$ ) or baseline assessment ( $M = 5.66, SE = 0.36$ ).

Men's overall feelings of reinforcement for engaging in sexual aggression varied over time as a function of program participation,  $F(2, 904) = 3.25, p < .05, \text{Cohen's } d = .17$ . Program participants believed sexually aggressive behavior to be less reinforcing at the 4-month follow-up ( $M = 2.14, SE = 0.07$ ), compared to baseline ( $M = 2.42, SE = 0.08$ ) or the 7-month follow-up ( $M = 2.35, SE = 0.07$ ). Among control group participants, their own anticipated feelings of reinforcement for engaging in sexual aggressive behavior did not vary over time. At the 4-month follow-up, level of reinforcement for sexual aggression was lower among program ( $M = 2.14, SE = 0.07$ ) compared to the control participants ( $M = 2.40, SE = 0.07$ ).

A three-way interaction between time, group, and history of sexual aggression was also found,  $F(2, 904) = 4.21, p < .05, \text{Cohen's } d = .19$  (See Figure 3). In the program group, SA men

reported lower levels of reinforcement for sexual aggression at the 4-month ( $M = 2.14$ ,  $SE = 0.13$ ), and 7-month follow-up ( $M = 2.57$ ,  $SE = 0.14$ ) compared to baseline ( $M = 2.71$ ,  $SE = 0.15$ ). At baseline, SA men in the program ( $M = 2.71$ ,  $SE = 0.15$ ) and control group ( $M = 2.60$ ,  $SE = 0.14$ ) reported higher levels of reinforcement for sexual aggression compared to non-SA men in the program ( $M = 2.12$ ,  $SE = 0.04$ ) and control groups ( $M = 2.14$ ,  $SE = 0.04$ ). In the control group, at the 4-month follow-up, SA men reported higher levels of reinforcement for sexual aggression ( $M = 2.67$ ,  $SE = 0.14$ ) compared to non-SA men ( $M = 2.13$ ,  $SE = 0.04$ ). At the 4-month follow-up, SA men in the control group reported higher levels of reinforcement for sexual aggression compared to SA men in the program group ( $M = 2.14$ ,  $SE = 0.13$ ). At the 7-month follow-up, SA men in the program ( $M = 2.57$ ,  $SE = 0.14$ ) and control group ( $M = 2.60$ ,  $SE = 0.13$ ) reported higher levels of reinforcement for sexual aggression compared to non-SA men in the program ( $M = 2.12$ ,  $SE = 0.04$ ) and control groups ( $M = 2.18$ ,  $SE = 0.03$ ).

**Aim 4: Increase prosocial bystander behavior and support for victims.** Men's likelihood to intervene in an inappropriate dating situation did not reveal a significant time by group interaction. A chi-square analysis indicated that there were no differences between groups in men's likelihood to contribute to rape prevention efforts.

**Aim 5: Increase behaviors that ensure mutual uncoerced consent.** T-tests were conducted to examine whether men's labeling the scenario as a sexually aggressive act differed between groups at the 4- and 7-month follow-up. After 7 months, men in the program group labeled Scenario I as rape ( $M = 7.90$ ,  $SD = 1.85$ ) to a greater degree than did men in the control group ( $M = 7.46$ ,  $SD = 2.12$ ),  $t(456) = 2.31$ ,  $p < .05$ .

**Aim 6: Reduce rates of sexual aggression.** Within the backwards elimination hierarchical log linear analysis, the best fitting model included three two-way interactions and

one main effect. Specifically, sexual aggression over the 4-month follow-up and group,  $G^2(4, N = 437) = 7.47, p < .01$ ; sexual aggression over the 4-month follow-up and sexual aggression over the 7-month follow-up,  $G^2(4, N = 437) = 23.41, p < .001$ ; and history of sexual aggression and sexual aggression over the 4-month follow-up,  $G^2(2, N = 437) = 16.16, p < .001$ . Chi-square analyses explored the relationship between group and sexual aggression over the 4-month follow-up,  $\chi^2(1, N = 7.33) = 7.33, p < .01$ ;  $p < .05$ , Fisher's exact test. Approximately 1.5% of men in the program group ( $N = 3$ ) reported perpetrating sexual aggression over the 4-month follow-up, compared to 6.7% of men in the control group ( $N = 17$ ).

A second chi-square analysis explored the relationship between sexual aggression over the 4-month follow-up and sexual aggression over the 7-month follow-up,  $\chi^2(1, N = 435) = 35.50, p < .001$ ;  $p < .001$ , Fisher's exact test. Whereas 23.5% of men who perpetrated sexual aggression over the 4-month follow-up also perpetrated over the 7-month follow-up ( $N = 4$ ), 1.4% of men who did not perpetrate over the 4-month follow-up engaged in sexual aggression over the 7-month follow-up ( $N = 6$ ). A third chi-square analysis explored the significant interaction between history of sexual aggression and sexual aggression over the 4-month follow-up,  $\chi^2(1, N = 435) = 28.90, p < .001$ ;  $p < .001$ , Fisher's exact test. Whereas 24% of men with a history of sexual aggression perpetrated over the 4-month follow-up ( $N = 7$ ), only 3% of men without a history of sexual aggression engaged in sexual aggression over the 4-month follow-up ( $N = 13$ ).

### Discussion

The implementation of concurrent and specifically tailored interventions for women and men living within the same university communities represents an innovative shift in how sexual assault prevention is currently conducted on college campuses. Given that numerous

investigations of individual programs for men and women suggest modest effects (for reviews see Anderson & Whiston, 2005; Morrison et al., 2004), we hypothesized that by targeting students living within the same communities that we would be able to foster more long-standing change and a reduction in rates of sexual aggression.

A number of positive outcomes were reported for men who participated in the program. Compared to men in the control group, men in the program group found sexually aggressive behavior less reinforcing. Program group men, relative to control group men, also evidenced larger decreases in associations with sexually aggressive peers and exposure to sexually explicit media relative to the control group. Given that it has been suggested that the problem with most rape prevention efforts is that the messages given to men in the context of such programming are not backed up in the outside world (Lonsway et al., 2009), this finding is positive. Program men also believed that their friends would be more likely to intervene when they witnessed inappropriate behavior in others compared to men in the control group. These findings are noteworthy in light of previous research suggesting that men's own willingness to intervene is strongly associated with their perceptions of how other men might act in similar situations (Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003). It was disappointing that men, themselves, did not indicate a greater tendency to intervene as a function of program participation. Such findings are also in contrast to the findings of Banyard et al. (2007), where they found that the bystander intervention program had a positive effect on self-reported bystander behavior in both men and women participants. There are differences between the two programs and investigations which may partially explain the results. Nonetheless, changing men's ability to intervene against the behavior of aggressive men requires men to be aware that their peers will support them to intervene. Without the perception of peer support to intervene, it

may be difficult for college men to actually take action against the behavior of aggressive peers. Future prevention efforts with men would likely benefit from an increased focus on the development of specific bystander intervention skills as well as the addition of strategies that would ensure that post-treatment gains are maintained.

In light of research suggesting that sexually aggressive men vary in their response to prevention programs compared to non-sexually aggressive men (Schewe & O'Donohue, 1993), analyses were also conducted to examine the impact of the program among men with a history of sexual aggression. The frequency of men with a history of sexual aggression was quite small, and as such, findings should be interpreted with caution. However, sexually aggressive men in the program group, but not sexually aggressive men in the control group, reported increases in their perceptions that other men would intervene in risky dating situations. Men with a history of sexually aggressive behavior in the program group were also less likely than men with a history of sexual aggression in the control group to feel that sexually aggressive behavior was reinforcing at the 4-month follow-up. It is possible that because men in the program group felt that other men believed that aggressive behavior was not acceptable (as evidenced by their perception that other men would intervene) then they personally found sexually aggressive behavior to be less reinforcing. These are important findings in light of research suggesting that most men are mistaken about their peers' attitudes towards sex, and that the majority of men are uncomfortable with the behaviors, language, and attitudes of men who commit sexual violence (Berkowitz, 2002a; Berkowitz, 2010). Ultimately, in order to prevent the ability of men with a history of sexual aggression to engage in subsequent aggressive behavior, it may be necessary for the campus culture to provide continuous reinforcement of prosocial norms.

Men also reported engaging in less sexual aggression if they were in the program compared to the control group over the 4-month follow-up. Whereas 1.5% of men in the program group reported perpetrating sexual aggression over the 4-month follow-up, 6.7% of men reported perpetrating sexual aggression over the interim in the control group. These findings are particularly noteworthy in light of the fact that, with very few exceptions (e.g., Foubert & Perry, 2007), researchers have not addressed whether their program had an effect on actual rates of sexual aggression. Although there were no differences in rates of sexually aggressive behavior over the 7-month follow-up period, the findings of differences at the time of the first follow-up assessment indicate that this intervention shows promise for reducing sexual violence on college campuses. Such findings may be due to changes in personal behaviors and perceived group norms that can be strengthened and extended for a longer time period. Despite the rebound in rates of assaults, men in the program group still reported positive gains at the 7-month follow-up, including that they were more likely to label unwanted sexual situations as rape to a greater degree than men in the control group.

It should be noted that a number of outcomes did not change as a result of program participation. For example, there were no differences between groups on willingness to support rape prevention efforts although other studies have demonstrated positive changes in these outcomes (e.g., Foubert & McEwen, 1998). In addition, positive changes in rape myth acceptance did not occur as a function of program participation. It is possible that there were some immediate changes as a function of program participation that were not maintained until the first follow-up, and it is also possible that the measure of rape myth acceptance, developed over a decade ago, was not sensitive to change over time. As suggested in recent reviews of the construct of rape myth acceptance (see Bohner, Eyssel, Pina, Siebler, & Viki, 2009), there are

numerous limitations with existing measures of rape myth ideology, and recently, updated measures have been developed that may more accurately reflect modern conceptualizations of rape myth acceptance (e.g., Gerger, Kley, Bohner, & Seibler, 2007).

Despite the positive findings, some limitations of the study should be noted. First, it is not possible to identify the key intervention components responsible for participant change.

Although it is quite likely that the intensive facilitator training coupled with the fact that the program incorporated social norms and bystander strategies to intact groups of men led to the observed benefits, future research is needed to explore the mechanisms responsible for change. Further, it is not known whether the men's program administered as part of the *Community Programming Initiative* would demonstrate similar outcomes if it were administered without the women's risk reduction program. Did the offering of two parallel programs to students in the same residence halls enhance the program benefits for each? This question could be addressed by administering the programs jointly in selected dorms and separately in others. Thus, whereas it is possible that the positive outcomes were facilitated by the joint programming, this will require further evaluation.

Secondly, although the program demonstrated short-term positive effects on rates of sexual perpetration, the data also highlight the fact that many men perpetrate repeatedly, and that more intensive intervention may be needed to maintain changes for a longer period of time. Specifically, 24% of men with a history of sexual aggression perpetrated over the 4-month follow-up, and 23.5% of men who perpetrated sexual aggression over the 4-month follow-up also perpetrated over the 7-month follow-up. Reports of sexual aggression among men with no prior history were far fewer. Specifically, only 3% of men without a history of sexual aggression engaged in sexual aggression over the 4-month follow-up, and 1.4% of men who did not

perpetrate over the 4-month follow-up engaged in sexual aggression over the 7-month follow-up.

These data support previous findings that a minority of men commit a majority of assaults and are repeat offenders. Such findings must be addressed in future prevention efforts.

Problematically, the vast majority of prevention efforts are universal interventions; targeting men regardless of their history of sexual aggression or risk for subsequent assault. A targeted intervention aimed at reducing proclivity to rape among high-risk groups and engaging bystanders to intervene with them is a vital step in the development and testing of sexual assault prevention programs.

Third, because the majority of outcome measures involved self-report, it is unclear the extent to which participants' reports were valid. In studies such as these, social desirability of responses becomes an issue. However, there were no differences on the social desirability measure between program and control groups at baseline, and self-report measures are widely utilized in other studies. It should also be noted that the magnitude of effects for continuous program outcomes were generally small. Finally, although the program was offered to all residents in the dormitory, approximately 57% of the residents attended the sessions and it is not clear if this sample adequately represents the men who resided in the dormitories. Despite these limitations, the researchers in the present study administered and tested a novel method for administering a sexual assault prevention program in order to promote community based change within a college setting; a high-risk environment for sexual assault, and the program was successful in improving a number of variables shown to be associated with assaults. It is noteworthy that the present study focused on students who were in their first year of college, a time of transition when interventions are particularly needed.

Advancing the science of sexual assault prevention interventions for men is an important public health priority. Despite a lack of evidence for attitudinal change among program participants, participants still self-reported that they were less likely to perpetrate over the first follow-up period; a promising key finding. The present study suggested that the intervention was successful in working towards changing men's perceptions of the community culture that condones violence, such that after four months less sexually aggressive behavior was perpetrated among program participants. Personally, men reported less exposure to sexually explicit media and lower personal reinforcement for sexually aggressive behavior. Changes were also evidenced in men's behavior towards sexually aggressive men, including a lower tendency to associate with sexually aggressive men, and the increased perception that other men would intervene if they witnessed inappropriate dating behavior. Although it is ultimately the responsibility of potential perpetrators to take responsibility for ending violence against women, these results suggest that researchers and advocates can play an important role in developing preventative interventions to facilitate community-based change in the norms that serve to condone sexual violence.

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Table 1

*Descriptive Statistics: Men’s Program Outcome Measures*

Group	Pre-test		4-month		7-month	
	M	SE	M	SE	M	SE
<i>Aim 1: Decrease Rape Myth Acceptance and Negative Attitudes Towards Women</i>						
<u>Hypergender Ideology</u>						
Exp (N=203)	55.07	2.07	53.99	2.09	52.13	2.19
Con (N=250)	56.52	1.99	54.95	2.01	53.68	2.10
<u>Rape Myth Acceptance</u>						
Exp (N=204)	54.14	1.93	52.24	2.04	49.18	2.17
Con (N=249)	53.72	1.99	55.61	2.10	51.09	2.23
<i>Aim 2: Increase the Accuracy of Men’s Perceptions of Other Men’s Attitudes and Behaviors</i>						
<u>Peer Disapproval for Sexual Aggression</u>						
Exp (N=200)	9.55	0.36	9.54	0.37	9.61	0.35
Con (N=251)	9.76	0.35	9.73	0.35	9.66	0.34
<u>Perception of Peer Engagement in Bystander Intervention</u>						
Exp (N=206)	28.69	0.79	30.58	0.80	29.49	0.84
Con (N=252)	29.75	0.76	29.17	0.77	26.87	0.81
<i>Aim 3: Create More Appropriate Norms</i>						
<u>Association with Aggressive Peers</u>						
Exp (N= 204)	3.80	0.18	2.97	0.16	3.03	0.17
Con (N=252)	3.33	0.18	3.26	0.15	2.81	0.16
<u>Modeling of Sexual Aggression</u>						
Exp (N= 204)	6.77	0.37	4.79	0.30	4.56	0.27
Con (N=249)	5.66	0.36	5.20	0.29	4.39	0.26
<u>Reinforcement for Sexual Aggression</u>						
Exp (N= 204)	2.42	0.08	2.14	0.07	2.35	0.07
Con (N=249)	2.37	0.07	2.40	0.07	2.39	0.07
<u>Personal Engagement in Bystander Intervention</u>						
Exp (N= 205)	33.48	0.71	33.54	0.68	31.88	0.75
Con (N=254)	32.49	0.68	31.87	0.66	31.11	0.73

Note: Exp= Experimental Group; Con= Control Group

Figure 1

*Three Way Interaction between Time, Group and History of Sexual Aggression in Men’s Perceptions of Other Men’s Bystander Behavior*

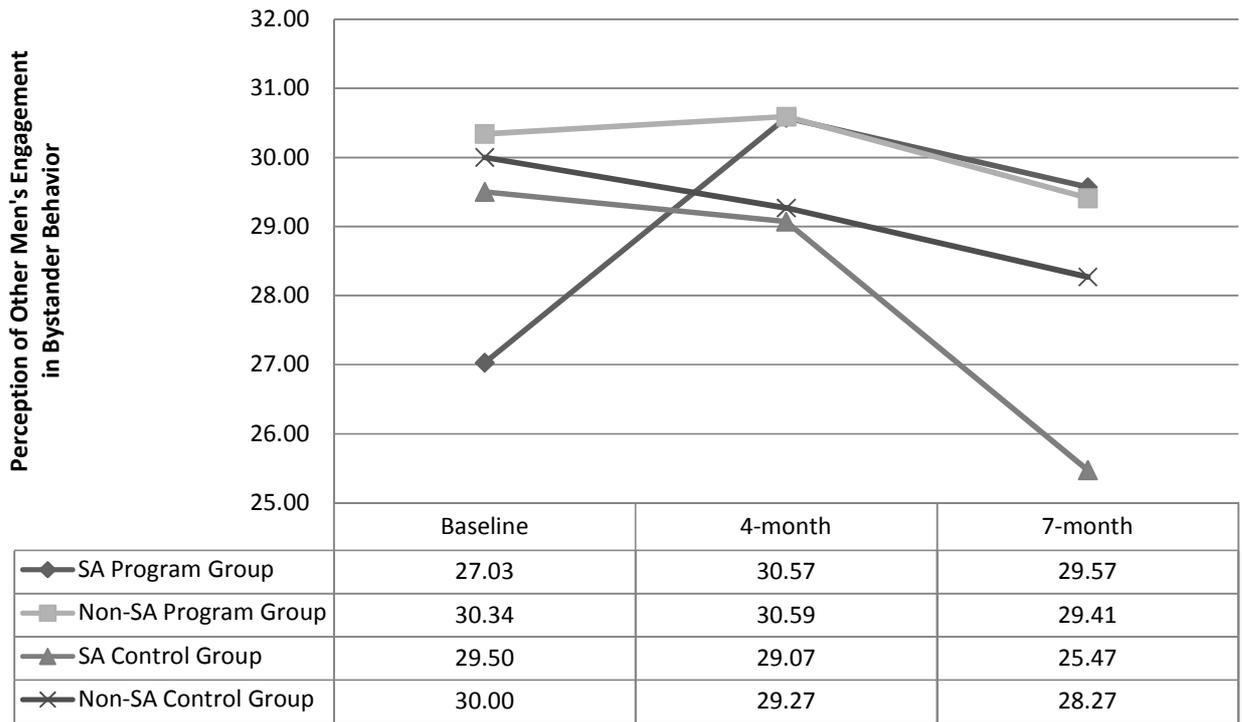


Figure 2

*Three Way Interaction between Time, Group and History of Sexual Aggression in Men’s Association with Sexually Aggressive Peers*

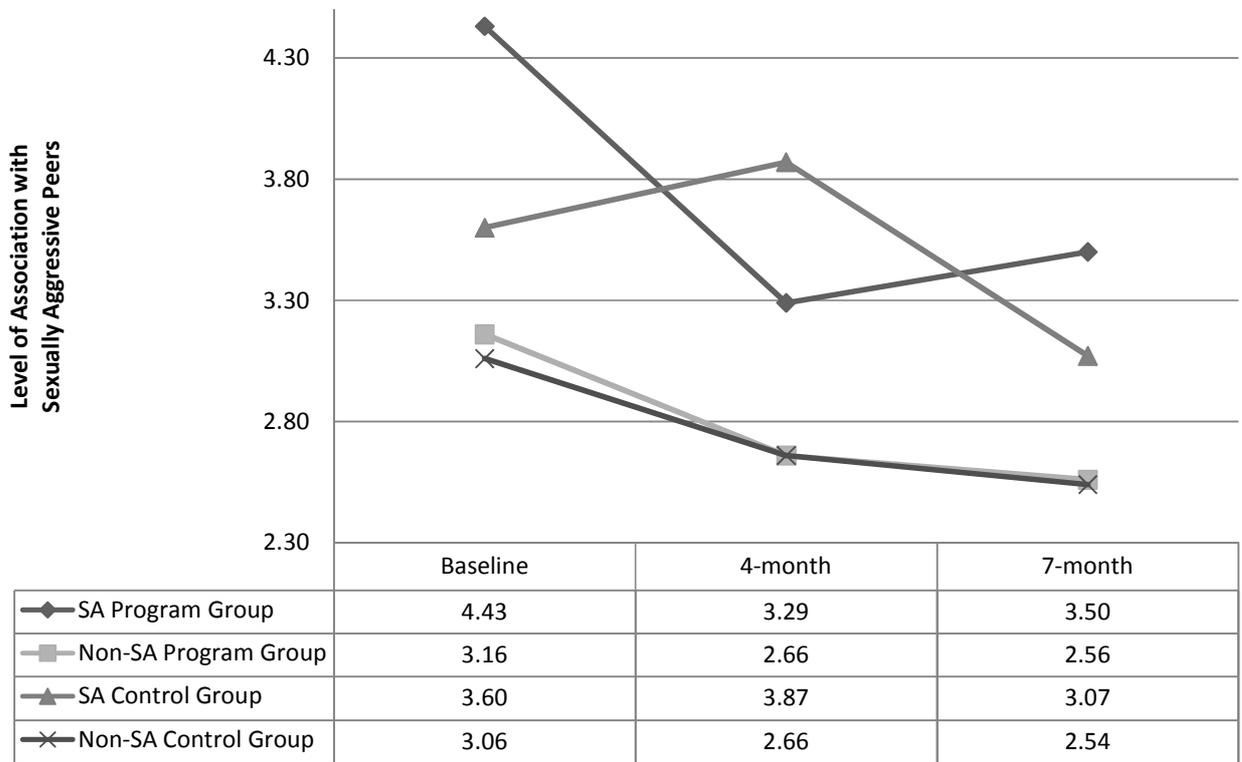


Figure 3

*Three Way Interaction between Time, Group and History of Sexual Aggression in Men's Reinforcement for Sexual Aggression*

