

Sexual Coercion Practices Among Undergraduate Male Recreational Athletes, Intercollegiate Athletes, and Non-Athletes

Violence Against Women

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Abstract

Prior research shows that male intercollegiate athletes are at risk for perpetrating sexual violence. Whether this risk extends to male recreational athletes has not been explored. This study assessed associations between attitudes toward women, rape myth acceptance, and prevalence of sexual coercion among 379 male, undergraduate recreational and intercollegiate athletes and non-athletes. Our analyses showed significant differences between the responses of athletes and non-athletes for all dependent variables, and intercollegiate and recreational athletes on attitudes toward women and the prevalence of sexual coercion. Controlling for rape myth acceptance and traditional gender role attitudes eliminated differences between athletes and non-athletes in prevalence of sexual coercion.

Keywords

college athletes, sexual coercion, rape myths

Sexual violence against women is still a major public health problem that occurs in various forms (Gidycz, Warkentin, & Orchowski, 2007), one of which is sexual coercion (Jewkes, Sen, & Garcia-Moreno, 2002). Sexual coercion is defined as any

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unwanted oral, vaginal, or anal penetration as a result of verbal or physical pressure, including rape (Muehlenhard, Goggins, Jones, & Satterfield, 1991; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). A joint publication by the Centers for Disease Control and Prevention (CDC) and the National Center for Injury and Control reports that 18.3% of American women have experienced forced sex during their lifetime, and 44.6% have experienced sexual violence victimization other than rape within their lifetime (Black et al., 2011). According to Black and colleagues (2011), 37.4% of female rape victims were first raped during their college-aged years (age 18-24). In a nationwide study, Fisher, Cullen, and Turner (2000) indicate that 1 in every 36 college women (2.78%) has experienced attempted or completed rape; however, a more recent study indicated that 19% of undergraduate women have experienced attempted or completed rape (Krebs, Linquist, Warner, Fisher, & Martin, 2009). Research also indicates that college women have a higher risk for being a sexual violence victim compared with their non-collegiate peers (Karjane, Fisher, & Cullen, 2005). Victims of sexual violence have a high price to pay physically and emotionally (Foubert, Godin, & Tatum, 2010). These victims may face sexually transmitted infections, unwanted pregnancies, and physical scars or bruising. Unseen are the emotional scars, which could manifest in depression, suicidal thoughts, social isolation, and/or promiscuity (Foubert et al., 2010). Often neglected is the financial cost that is associated with the services needed to properly deal with the physical and emotional ramifications (Foubert et al., 2010). Consequently, there is a critical need to examine the occurrence of sexual violence on college campuses.

Male intercollegiate athletes are at particularly high risk for perpetrating sexual violence (McCray, 2015). Intercollegiate athletes are athletes that represent their college or university in athletic events that are coordinated by an authoritative body (e.g., National Collegiate Athletic Association [NCAA]), against other colleges or universities. According to the most recent national report of college campuses, which included a survey of 30 NCAA Division 1 institutions, records indicate that although male intercollegiate athletes accounted for 19% of all sexual violence cases reported to the respective Judicial Affairs, they only comprised 3% of the student populations (Crosset, Benedict, & MacDonald, 1995). In the same study, results showed that reports to campus police also indicated a high proportion of sexual assault perpetrators who were male, undergraduate, intercollegiate athletes. The U.S. Department of Education also underscored this phenomenon in their white letter, imploring institutions to conduct sexual violence programs and/or seminars for both coaches and student athletes (Ali, 2011). President Obama followed up this initiative by signing a memorandum to create a task force to address sexual violence on national college campuses (Sutherland, Amar, & Sutherland, 2014). Per the memorandum, a portion of the task force's responsibilities include meeting with collegiate athletic associations (Obama, 2014).

Despite the ongoing, high-profile cases of violence against college women by male intercollegiate athletes, research on this phenomenon has been stagnant, "with only two publications addressing violence against women in the last 15 years" (McCray, 2015, p. 3). Of the two articles published, one (Sawyer, Thompson, & Chicorelli, 2002) compared the likeliness of sexual assault perpetration between male,

intercollegiate athletes and non-athletes, and the other (Murnen & Kohlman, 2007) conducted a meta-analysis of behaviors and attitudes that support sexual aggression. McCray (2015), after completing a systematic review of literature from the past 22 years concerning sexual violence against women by student athletes, concluded that there is a need for more empirical data. This present study not only adds to the paucity of research on intercollegiate athletes, but also widens the scope to include recreational athletes.

Nationwide, the largest group of athletes at a college or university is recreational athletes (Lamont-Mills & Christensen, 2006). This study sought to widen the current scope of “athletes” to include those who play sports recreationally in college. Recreational athletes are operationally defined as students who compete in a group sport (e.g., flag football) or individual sport (e.g., wrestling) at a recreational level, either within the college setting or the local community. Consistent with prior research, we define *recreational level* to include students who train 1-4 times a week during their respective sport season, do not compete nationally or internationally, and are not members of any intercollegiate team (Stirling & Kerr, 2006). These students also could not be undergoing professional athletic training (Malinzak, Colby, Kirkendall, Yu, & Garrett, 2001). Although these athletes do not represent the university in competitions, many of the same elements that exist within the environment of a male intercollegiate team are present, to some degree, in the recreational athletic environment. These elements include, for example, a sense of competitiveness, regulated practice schedules, relative notoriety, and aggression. Moreover, members within the recreational athletic group include former high school interschool athletes, and athletes who compete intensely for local associations because the sport is not offered at their college, or the outside organizations are better staffed/equipped (e.g., martial arts, softball, hockey). Indeed, recreational athletes are exposed to risk factors for sexual violence similar to intercollegiate athletes and, thus, also may be at heightened risk for sexual violence perpetration.

Risk Factors

Prior studies have identified attitudes toward women and rape myth acceptance, among others, as risk factors for perpetrating sexual violence among male, intercollegiate athletes (Kimble, Russo, Bergman, & Galindo, 2010). The current study sought to build on this prior work by assessing rape myth acceptance, attitudes toward women, and the occurrence of sexual coercion among intercollegiate and recreational male undergraduate athletes.

Rape Myth Acceptance

The Theory of Planned Behavior posits that a positive or negative attitude toward a particular behavior will impact one’s intention to participate in the behavior and, subsequently, actual engagement in that behavior (Glanz, Rimer, & Viswanath, 2008). The Theory of Planned Behavior has been used to explain a wide array of behaviors, including sexual violence. In this context, rape myth acceptance—the approval of

“beliefs and situational definitions that excuse rape or define assaultive situations as something other than rape” (Boeringer, 1999, p. 82)—has been shown to be a behaviorally relevant attitude that should be targeted in an intervention. The concept of rape myth acceptance has been shown to not only reflect attitudes toward sexual violence, but also the propensity for committing sexual violence (Bohner, Siebler, & Schmelcher, 2006). Indeed, research indicates that male intercollegiate athletes are more accepting of rape myths than the average male college student (Boeringer, 1999; McMahon, 2011; Sawyer et al., 2002).

Attitudes Toward Women

Attitudes toward women is another behaviorally relevant attitude in this context, as there is empirical evidence that adherence to traditional gender role beliefs is associated with male perpetration of sexual violence against women (Gage, 2008). According to Eaton and Matamala (2014), men and women are in a hierarchal relationship that favors men over women and characterizes masculinity as active and femininity as responsive to male sexual advances, thus potentially leading to one partner exerting sexual pressure on another. In addition, much of the criticism of the environment surrounding intercollegiate athletics relates to pervasive attitudes regarding male superiority and female inferiority. The culture within male-only sports is highly gender segregated, favoring anything masculine and devaluing anything considered feminine (Murnen & Kohlman, 2007). Research shows that male-favoring factors, such as hypermasculine discourse, contribute to sexual violence (Anderson, 2009; Parent, 2003). According to Adams, Anderson, and McCormack (2010), common athletic hypermasculine discourse includes war-like, misogynistic, and sexually violent analogies. These analogies, which include making reference to battles and calling a male athlete a woman’s name when they perform poorly, lead to traditional gender role opinions of women over time (Gage, 2008). Thus, attitudes toward women is another important construct for understanding perpetration of sexual violence among male collegiate athletes.

Purpose of the Current Study

The purpose of this study was to assess the prevalence of and associations between attitudes toward women, rape myth acceptance, and sexual coercion among athletes and non-athletes, and also within the athletic group (recreational vs. intercollegiate). We focus on sexual coercion, which includes the use of verbal and/or physical means to pressure or force an individual into engaging in unwanted sexual activity, rather than sexual violence *per se* for several reasons. First, the construct has not garnered as much attention as sexual violence in the research literature (Logan, Cole, & Shannon, 2007). Second, what research does exist suggests it is a high base rate behavior. For example, a study reported that one-third of sexually active college men use nonphysical tactics to pressure someone into sex (Lyndon, White, & Kadlec, 2007). Third, there has been even less research on verbal sexual coercion (DeGue,

DiLillo, & Scalora, 2010). Indeed, verbal sexual coercion can result in emotional and physical sequelae (DeGue et al., 2010). In addition, there is also evidence that both verbal and physical sexual coercion co-occur (Gidycz et al., 2007). Fourth, and finally, research suggests that men who solely commit verbal sexual coercion are at heightened risk of committing more severe forms of sexual violence in the future (e.g., physical force, use of weaponry) (DeGue et al., 2010), intimating that verbal sexual coercion is a gateway to physical sexual coercion. Thus, identifying and targeting those at risk for perpetrating verbal and physical sexual coercion can prevent escalation to violence.

We chose to study *current* athletes (whether recreational or intercollegiate) rather than students who *previously* participated in sports to build on existing literature, which has examined the effects of adolescent involvement in sports on college men (e.g., Forbes, Adams-Curtis, Pakalka, & White, 2006). Although prior research has largely focused on intercollegiate athletes, our study is unique in its inclusion of recreational athletes, some of whom may not participate in any form of sports until they enter college.

The study hypotheses were as follows:

Hypothesis 1: Male collegiate athletes (recreational and intercollegiate) will demonstrate less positive attitudes toward women (i.e., traditional gender role attitudes), greater acceptance of rape myths, and higher rates of sexual coercion (verbal and physical) than male non-athletic collegiate students.

Hypothesis 2: Male intercollegiate athletes will demonstrate less positive attitudes toward women, greater acceptance of rape myths, and higher rates of sexual coercion (verbal and physical) than male recreational athletes.

Hypothesis 3: Less positive attitudes toward women and greater acceptance of rape myths will be associated with higher prevalence of sexual coercion.

Hypothesis 4: The association between athletic status (athlete vs. non-athlete) and sexual coercion will no longer be significant after controlling for differences in attitudes toward women and rape myth acceptance.

Method

Research Design

This study used a cross-sectional research design to examine the association between athlete type and factors associated with sexual coercion, as well as sexual violence more generally. An online survey was conducted with male, undergraduate, collegiate students who were athletes (i.e., recreational and intercollegiate athletes) at the time of the study and a comparison group of male, undergraduate, non-athletic collegiate students (at the time of the study). The study was conducted at a public university within the southeastern United States. All study activities were approved by the university's Institutional Review Board (IRB). Each research participant provided electronic informed consent prior to beginning the survey.

Sample and Recruitment

Male undergraduate students at a large, public, NCAA Division I university in the southeastern United States were recruited to participate in this study. Forbes and colleagues suggest that there is an association between violence against women and athletic participation at Division I schools, as these athletes generate more revenue and are typically segregated from the rest of the student body (e.g., dormitories), compared with smaller schools (e.g., Division II and III schools) where athletes are more integrated into the university community (Forbes et al., 2006). This association is supported by earlier studies (Crosset et al., 1995; Koss & Gaines, 1993).

Eligible participants were male, an undergraduate full-time student, and at least 18 years of age. Participants were recruited using multiple strategies: announcements made in undergraduate classes that contained athletes, announcements sent out in newsletters, flyers posted in prominent common areas, and emails sent to undergraduate male students via the registrar's office. All recruitment materials described the study as one focused on the attitudes and beliefs of male, undergraduate students, and not athletes, specifically. During the time of the study, the total eligible population (currently enrolled, male, undergraduate students) was 12,266, of which 276 were intercollegiate athletes. The registrar's office is unable to accurately declare total number of male, undergraduate recreational athletes at the time of the study.

Participants

The required total sample size to test our study hypotheses was computed in GPower (using effect size of 0.19, alpha of 0.05, and power of 0.95) and found to be 363. At the end of the recruitment period, a total of 1,969 undergraduate men accessed and began the study; however, only 1,267 (257 athletes and 1,010 non-athletes) male, undergraduate students completed the questionnaire. Among the 257 self-identified athletes, 69 of the recreational athletes were over the age of 23. Due to our efforts to create a comparable sample of recreational to intercollegiate athletes, those over the age of 23 were removed because of the NCAA's "five year rule" (NCAA, 2014, p. 75), which restricts an intercollegiate athlete's eligibility to compete 5 years from their first collegiate semester (typically around the age of 23).

Independent samples *t* tests were conducted to test for possible confounding variables. Specifically, each demographic variable was compared between current athlete and non-athlete respondents; only age was found to differ significantly between the groups. As such, we matched current athletes to non-athlete respondents on age to create comparable groups for analysis. All demographic variables were compared again following this matching procedure; results showed no significant differences between the final sample of current athletes and non-athletes.

The final sample comprised 188 athletes (29 intercollegiate and 159 recreational) and 191 non-athletes (see Table 1). Most were Caucasian (55.6%, $n = 211$), identified themselves as preferring to have sex with women (87.6%, $n = 332$), and were not in a committed relationship (i.e., single) at the time of the study (55.4%, $n = 210$).

Table 1. Participant Characteristics Overall and by Athletic Status.

Characteristic	Overall		Athletes		Non-athletes		Bivariate comparison
	N	M (SD) or %	N	M (SD) or %	N	M (SD) or %	
Age (in years)	379	20.42 (0.21)	188	21.03 (3.38)	191	20.99 (3.37)	$t = 0.092$ $\chi^2 = 4.834$
Academic classification	379		188		191		
First year	47	12.4%	24	12.8%	23	12.0%	
Second year	93	24.5%	45	23.9%	48	25.1%	
Third year	109	28.7%	54	28.7%	55	28.8%	
Fourth year	94	24.8%	42	22.3%	52	27.2%	
Fifth year	24	6.4%	16	8.5%	8	4.2%	
Sixth year	4	1.1%	3	1.6%	1	0.5%	
Not disclosed	8	2.1%	4	2.1%	4	2.1%	
Relationship status	379		188		191		$\chi^2 = 5.142$
Single	210	55.4%	99	52.7%	111	58.1%	
In a relationship	158	41.7%	80	42.6%	78	40.8%	
Not disclosed	11	2.9%	9	4.8%	2	1.0%	
Sexual preference	379		188		191		$\chi^2 = 10.355^*$
Women	332	87.6%	171	91.0%	161	84.3%	
Men	17	4.5%	2	1.1%	15	7.9%	
Women and men	17	4.5%	8	4.3%	9	4.7%	
Not disclosed	13	3.4%	7	3.7%	6	3.1%	
Member of a fraternity	379		188		191		$\chi^2 = 9.742^{**}$
Yes	62	16.4%	39	20.7%	23	12.0%	
No	307	81.0%	141	75.0%	166	86.9%	
Not disclosed	10	2.6%	8	4.3%	2	1.0%	
Race/ethnicity							$\chi^2 = 4.345$
Caucasian/White	211	55.6%	97	51.7%	114	59.7%	
African American/Black	29	7.7%	14	7.4%	15	7.8%	
Hispanic, Latino, or Spanish Origin	60	15.9%	33	17.5%	27	14.1%	
American Indian/Alaskan Native	1	0.26%	0	0.0%	1	0.5%	
Native Hawaiian/Pacific Islander	2	0.52%	1	0.5%	1	0.5%	
Asian	25	6.56%	14	7.4%	11	5.7%	
Multi-racial	51	13.4%	27	14.4%	24	12.6%	

Note. Comparisons were conducted between athletes and non-athletes.

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

Measures

The online survey was comprised of four scales: the Attitudes Toward Women Scale (Spence, Helmreich, & Stapp, 1973), the Illinois Rape Myth Acceptance Short Form (Payne, Lonsway, & Fitzgerald, 1999), Sexual Coercion subscale of the Revised Conflict Tactics Scale (Straus et al., 1996), and the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982). We describe these scales in more detail below.

The 15-item short version of the *Attitudes Toward Women Scale* was used to assess attitudes toward women, and specifically, to assess adherence to traditional gender role views (Spence et al., 1973). Participants responded to each item on a 4-point scale (1 = *strongly agree* to 4 = *strongly disagree*), and ratings were summed to create a total score. Higher scores correspond with attitudes of profemininity and unrestricted attitudes toward women, while lower scores correspond with pro-masculine views and traditional views of women. Question 8 (“It is ridiculous for a woman to run a locomotive and for a man to darn socks”) was omitted as it was not thought to be relevant to modern male college students. With this item removed, internal consistency was still good ($\alpha = .81$).

The 20-item version of the *Illinois Rape Myth Acceptance Scale* was used to measure rape myth acceptance. Participants responded to each item on a 7-point scale (1 = *totally disagree*, 7 = *totally agree*). Item-level responses were summed to create a total score; higher scores indicate higher levels of rape myth acceptance. Internal consistency was good ($\alpha = .87$).

The *Sexual Coercion subscale* of the *Revised Conflict Tactics Scale* (Straus et al., 1996) includes 7 items that query perpetration of sexual coercive behaviors in romantic relationships and has been used in many studies of college students (Hines, 2007; Straus, 2004; Straus et al., 1996). Items measure frequency of physical or verbal sexual coercion (*never*; *once*; *twice*; *3-5 times*; *6-10 times*; *11-20 times*; and *more than 20 times*, not in the past year but it did happen before). Item responses can be used to calculate lifetime and past year prevalence of sexual coercion, as well as chronicity and severity of sexually coercive behaviors. The data were coded according to the instrument’s scoring manual (Straus, 2004). Following these guidelines, the items were scored to create a dichotomous variable indicating lifetime prevalence (i.e., “ever prevalence”). This is the recommended approach over analysis of the ordinal scale categories, or calculation of a mean, which is often skewed because 70-90% of participants within a non-clinical study will typically indicate that they have never coerced someone into having sex (Straus, 2004). Internal consistency was good ($\alpha = .81$).

A social desirability scale was embedded in our online survey to minimize self-reporting bias. Specifically, we used the 13-item short form version C of the *Marlowe-Crowne Social Desirability Scale* (Reynolds, 1982). Internal consistency was acceptable ($\alpha = .67$).

The online survey concluded with demographic questions querying age, sexual preference (*I like to sleep with women*; *I like to sleep with men*; *I like to sleep with men and women*; *prefer not to disclose*), fraternity membership (*yes/no*), relationship status (*single*; *in a relationship*; *prefer not to disclose*), and academic classification (*first year*; *second year*; *third year*; *fourth year*; *fifth year*; *sixth year*; *prefer not to disclose*).

Procedures

A web-based survey was created using Qualtrics computer software and distributed to potential volunteers via email. Participants were required to read the informed consent prior to completing the survey. After each participant completed the online survey, he was instructed to click on an active hyperlink that directed him to a separate secure site to enter his school email address. This email address was entered into a drawing for a monetary reward. We specifically used these email addresses to verify student status, prevent possible duplications in study responses, and to notify the winners of the drawings.

Data Analysis

To test our first hypothesis, analyses of covariance (ANCOVA) were conducted to compare attitudes toward women and rape myth acceptance between athletes and non-athletes, and a binary logistic regression was used to compare the prevalence of sexual coercion and to calculate the relative risk of sexual coercion between athletes and non-athletes. To test our second hypothesis, we repeated these analyses using type of athlete (intercollegiate vs. recreational) as the grouping variable. To test our third hypothesis, we computed partial correlations to examine the relationship between gender role beliefs, rape myth acceptance, and sexual coercion. Finally, to test our fourth hypothesis, we conducted a binary logistic regression to estimate and compare the strength of association between group membership (athlete vs. non-athlete) and sexual coercion (as the dependent variable), with Attitudes Toward Women Scale and Illinois Rape Myth Acceptance Scale total scores as covariates. This enabled us to determine whether differences in attitudes toward women and rape myth acceptance may account for the relationship between group membership and sexual coercion, if any. The Marlowe-Crowne social desirability scale score and participant characteristics (age, academic classification, relationship status, sexual preference, fraternity association, and race/ethnicity) were included as covariates in all analyses.

Results

Attitudes and Beliefs

The first ANCOVA model was significant, $F(1, 375) = 32.75, p < .001$, indicating that athletes report more traditional gender role attitudes ($M = 24.27, SD = 5.60$) than non-athletes ($M = 27.94, SD = 6.53$). Results from a second ANCOVA indicated that athletes had higher rape myth acceptance scores ($M = 47.76, SD = 11.40$) compared with non-athletes ($M = 43.17, SD = 9.59$), $F(1, 375) = 16.71, p < .001$. In contrast, ANCOVAs showed no significant differences in attitudes toward women or rape myth acceptance between the intercollegiate and recreational athletes ($p = .192$ and $p = .991$, respectively).

Sexual Coercion

Overall, 46.0% of participants ($n = 173$)—54.3% of athletes ($n = 101$) and 37.9% of non-athletes ($n = 72$)—reported perpetrating some form of sexual coercion. Binary

Table 2. Prevalence of Lifetime Perpetration of Sexual Coercion.

	Overall		Athletes		Non-athletes		Comparison χ^2
	N	%	N	%	N	%	
Any sexual coercion	173	46.0	101	54.3	72	37.9	10.18***
I made my partner have sex without a condom (no force) ^a	109	29.1	74	39.8	35	18.5	20.56***
I used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex	17	4.5	16	8.6	1	0.5	14.20***
I used force (like hitting, holding down, or using a weapon) to make my partner have sex	20	5.3	18	9.7	2	1.1	13.90***
I insisted on sex when my partner did not want to (but did not use physical force)	111	29.5	60	32.3	51	26.8	1.33
I used threats to make my partner have oral or anal sex	19	5.1	18	9.7	1	0.5	16.41***
I insisted my partner have oral or anal sex (but did not use physical force)	101	26.9	58	31.2	43	22.6	3.50
I used threats to make my partner have sex	18	4.8	18	9.7	0	0.0	19.31***

Note. Overall $N = 379$ (188 athletes and 191 non-athletes). % are valid percentage of positive responses. Inconsistencies across cells reflect missing data. Comparisons were conducted between athletes and non-athletes.

^aThe original item reads "I made my partner have sex without a condom." The addition of "(no force)" was used to ensure clarity and consistency in interpretation by the study participants.

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

logistic regression showed that participant group (athlete vs. non-athlete) predicted sexual coercion, $\chi^2(12, 373) = 32.01, p < .001$. The odds ratio was 1.77 (95% confidence interval [CI] = [1.12, 2.79]), indicating that athletes were 1.77 times, or 77%, more likely to report engaging in sexual coercion compared with non-athletes. We used chi-square tests to determine whether or not there were significant differences in each individual sexual coercion subscale item between athletes and non-athletes. Results showed that athletes were more likely than non-athletes to report engaging in 5 out of 7 sexually coercive behaviors (see Table 2). These 5 items represent more severe forms of sexual coercion, as they involve force and threats of harm (see Table 2). In contrast, the 2 items that were not significantly different between athletes and non-athletes reflect less severe verbal forms of sexual coercion (e.g., "insisted" as opposed to "threatened"). A second binary logistic regression comparing lifetime prevalence of sexual coercion between intercollegiate and recreational athletes was not significant, $p = .10$.

Associations Between Attitudes, Beliefs, and Sexual Coercion

Partial correlations showed significant associations of gender role beliefs and rape myth acceptance with sexual coercion that were small to moderate in size. Specifically, controlling for participant characteristics, the likelihood of sexual coercion increased as rape myth acceptance increased ($r_p = .21, p < .001$) and attitudes toward women reflected more traditional gender role beliefs ($r_p = -.17, p < .05$). Partial correlations also revealed a strong association between rape myth acceptance and attitudes toward women ($r_p = -.47, p < .001$).

Attitudes and Beliefs as Covariates

The final analyses explored whether differences in attitudes toward women and rape myth acceptance account for the observed relationship between athletic status (athlete vs. non-athlete) and sexual coercion. The type of athlete variable was excluded from the analyses due to the lack of significant differences reported above. The binary logistic regression of athletic status predicting sexual coercion, with attitudes toward women and rape myth acceptance included as covariates, was significant, $\chi^2(14, 370) = 46.70, p < .001$. Including attitudes toward women and rape myth acceptance eliminated the significant association between group membership and sexual coercion (from $\beta = .57, SE = 0.23, p < .05$ to $\beta = .40, SE = 0.24, p = .10$). These results indicate that the effect of athletic status on likelihood of sexual coercion may be attributable to group differences in attitudes toward women and rape myth acceptance (see Figure 1).

Discussion

This study assessed rape myth acceptance, attitudes toward women, and sexual coercion among male, undergraduate, intercollegiate and recreational athletes and non-athletes. Consistent with the study hypotheses, our results indicate that male athletes had more traditional views of gender roles and had a higher affinity for rape myth acceptance than non-athletes. Our results also showed that student athletes engage in higher rates of sexual coercion than non-athletes. These findings are partly attributable to the masculine ideologies surrounding the structure of athletics (Gage, 2008). Rape myth acceptance and poor attitudes toward women have been identified in prior research as risk factors for sexual violence (Gage, 2008; Kimble et al., 2010) and, thus, are important targets for intervention. Indeed, results of our final set of analyses showed that the association between participant group (athlete, non-athlete) and prevalence of sexual coercion was accounted for, at least statistically, by differences in rape myth acceptance and attitudes toward women. When the risk factors were compared between types of athletes (intercollegiate vs. recreational), we found no significant difference. This finding could be due to similarities in athletic environment. Future research should explore the degree of hypermasculinity in male recreational sports. This study also found no significant differences in the prevalence of self-reported sexual coercion between intercollegiate and recreational athletes.

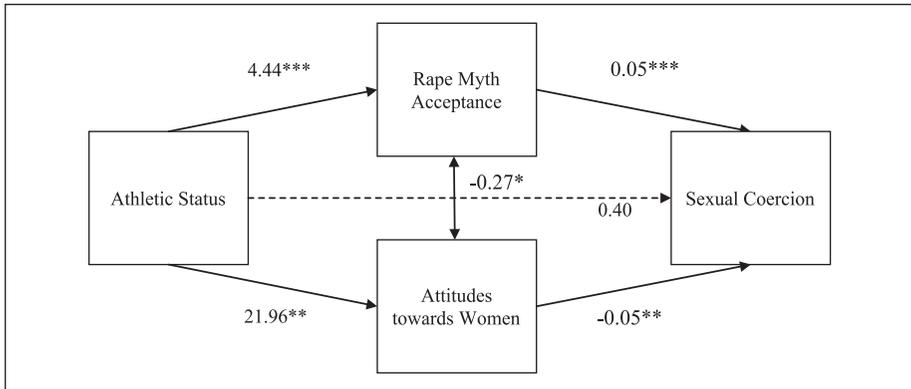


Figure 1. Mediation of association between athletic status and sexual coercion by rape myth acceptance and attitudes toward women.

Note. Values are unstandardized regression coefficients. Solid lines indicate direct associations. Athletic Status = athlete versus non-athlete. Analyses were conducted controlling for participant age, academic class, relationship status, sexual preference, fraternity association, race/ethnicity, and the Marlowe-Crowne social desirability scale score.

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

Taken together, our findings suggest the need for sexual coercion prevention strategies targeting student intercollegiate and recreational athletes. However, the relatively high rates of sexual coercion that we found in this study among both athletes (more than half) and non-athletes (more than one third) indicate the need for sexual coercion prevention programs on college campuses more generally, which supports previous literature (Struckman-Johnson, Struckman-Johnson, & Anderson, 2003). Indeed, the two sexual coercion items that did not differ significantly between athletes and non-athletes, namely “I insisted on sex when my partner did not want to but did not use physical force” and “I insisted my partner have oral or anal sex but did not use physical force” had the highest rates of endorsement.

Limitations

In addition to a number of strengths, including the relatively large, matched sample of male collegiate athletes and non-athletes, as well as our use of well-validated scales, the study also had several limitations. First, although our original intent was to recruit from multiple universities, we only sampled students at one university. Various scandals, hazing incidents, and other unfortunate events occurred at potential study sites during the recruitment period. These series of events at various universities, coupled with the universities’ protective nature over intercollegiate athletes (Lockhart, 2009), restricted us from obtaining a wider geographic sample. Second, to reduce potential bias attributable to social desirability, the study was advertised as one that sought to query beliefs and attitudes among all male, undergraduate students, and not athletes, specifically. In addition, a social desirability scale was built into the questionnaire and

used as a covariate in all analyses. However, it is nonetheless possible that the recent attention paid to collegiate sexual assaults may have affected participant responses. Third, potential participants self-selected and, as a result, the sample was not random. Fourth, the Sexual Coercion Subscale of the Revised Conflict Tactics Scale measures behaviors occurring within romantic relationships and perpetrated against a “partner.” Consequently, participants may not have reported sexually coercive behaviors perpetrated in other contexts (e.g., against strangers, flings, or one night stands). In addition, we calculated lifetime prevalence and, thus, some of the sexually coercive acts could have been perpetrated prior to matriculation into college. However, prior perpetration of sexual violence is a key predictor of future sexual assaults (Edwards & Vogel, 2015); therefore, this information is still meaningful. Fifth, the number of intercollegiate athletes was small ($n = 29$ out of a total population of 276), relative to the number of recreational athletes ($n = 159$); thus, conclusions regarding differences (or the lack thereof) between the two types of athletes are preliminary. Last, although we used the NCAA 5-year rule to determine the eligibility criteria of age, students may serve in the military or compete professionally prior to becoming an intercollegiate athlete. As such, some intercollegiate athletes may be older than the age of 23. The university records indicate that none of the intercollegiate athletes, at the time of the study, had competed professionally and only four out of 276 (1.45%) had served in the military prior to enrollment. That said, these four veteran athletes could have been under the age of 23 at the time of the study and, therefore, eligible to participate.

Conclusion and Future Research Directions

This study expands on the extant research in several ways. Past studies have examined associations between rape myth acceptance and sexual violence and have used that association to identify populations at high risk for sexual violence (e.g., fraternity men, athletes of revenue generating sports). In addition, a study explored rape attitudes and sexual experiences of intramural (i.e., recreational) athletes and non-athletes (Carr & VanDeusen, 2004); however, this is the first study to our knowledge that has queried sexual coercion and potential risk factors among male intercollegiate *and* recreational athletes. In addition, prior work has not assessed and compared the prevalence of sexual coercion between athletes and non-athletes by type of athlete. Finally, prior research has primarily focused on rape myth acceptance among intercollegiate athletes; our study also examined attitudes toward women and tested these variables as covariates that may account for the association between athletic status and sexual coercion.

Future studies should assess athletic identity in addition to rape myth acceptance and attitudes toward women as risk factors for sexual coercion in recreational athletes and intercollegiate athletes at other universities, as well as community colleges. Inclusion of recreational athletes is essential as this group represents the largest number of male undergraduate sport participants, but is studied infrequently (Lamont-Mills & Christensen, 2006). Moreover, some community college athletes compete recreationally and some hope to transfer to a 4-year institution. Longitudinal studies should assess the initial

beliefs and attitudes among community college athletes and then compare the attitudes among the same athletes who transfer to a 4-year institution and compete in athletics. Studies of this nature could speak to the potential impact that the culture of intercollegiate athletics at 4-year institutions has on athletes.

In conclusion, reducing sexual coercion on collegiate campuses is contingent, at least in part, upon the development and implementation of prevention programs that address risk factors for sexual coercion, including rape myth acceptance and attitudes toward women, among athletes and other high-risk populations. Participation of head coaches of men's athletic sports teams in these programs would increase the program's effectiveness (Ali, 2011), as coaches have an impact on masculine socialization (Steinfeldt et al., 2011). Should these coaches hold high-risk attitudes and beliefs, they could be (explicitly or implicitly) communicated to their athletes. Continuing this line of research may lead to the development and implementation of more effective prevention measures and, hopefully, the reduction in sexual coercion and sexual violence committed by male intercollegiate and recreational athletes on college campuses.

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