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Gender Attitudes and Sexual Behaviors

Comparing Center and Marginal Athletes and Nonathletes in a Collegiate Setting

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This research examines the impact of participating in different sports on male athletes' gender attitudes, hegemonic masculinity, sexual behavior, and sexual aggression. Expanding on past research that compares athletes with nonathletes, this research finds differences between collegiate athletes and men who do not participate in collegiate sports, as well as between men who play different collegiate sports. Athletes in center sports (such as football) scored significantly higher on hyper-masculinity scales, had lower attitudes toward women, and displayed more sexual aggression and more sexual activity than men who competed in marginal sports (e.g., track and field) or not at all.

Keywords: *athletes; gender attitudes; hegemonic masculinity; sexual aggression*

Scholarly study of the relationship between being an athlete and perpetrating violence against women is not new (Dabbs, 1998), although recent events underscore its continuing significance. For example, extensive media coverage of rape allegations made against Kobe Bryant (Madigan & Sink, 2004), lacrosse players at Duke University (Meadows & Thomas, 2006), and statutory rape charges against five members of the boys' hockey team at Milton Academy (Walker, 2005) has recently refocused attention on the issue. The fact that several of these incidents occurred at team events raises the question: What is it about men's team participation that seems to lead to such behavior?

Although coverage in the popular media seems to link being an athlete and aggressive sexual behavior, little empirical evidence exists to establish this relationship. This research examines the association between sport participation and the conceptions of gender and problematic sexual behavior of college-aged men. Drawing

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on Messner's theory of sports and masculinity, this research examines the relationship between participating in sports and the gender-related attitudes and sexual behavior of young men. Contributing to the growing scholarly attention to the link between male dominance in college sport and violence against women, this study argues that not all sports have the same effects on men's attitudes and behavior. The analysis shows the effects of participation in different kinds of sports on gender attitudes and sexual aggression of male athletes.

The legacy of men's dominance over collegiate sports is presumed to help preserve traditional hegemonic masculinity within sports networks on college campuses. Qualitative research testing this assumption has shown that traditional masculine norms inform both the attitudes and behavior of males who participate in the sports (McKay, Messner, & Sabo, 2000; Messner, 1992, 2002; Messner & Sabo, 1990). However, recent research has suggested that such effects differ between types of sports. Messner (2002) suggests that a sport's history within the university culture affects its economic and social position in the collegiate setting. Consequently, sports with relatively high status on campus and the capacity to attract economic resources are more likely to preserve hegemonic masculinity. Because of this, Messner (2002) distinguishes between prominent center sports such as football, basketball, and hockey, and sports that hold positions that are more marginal within universities such as track and field, tennis, and crew.

Pleck (1981) suggests that there are problematic consequences of hegemonic masculinity, which include attitudes and behaviors that are personally or socially harmful to men attempting to maintain this gender status. Hence, institutions that enforce such notions of masculinity can simultaneously promote repressive gender attitudes of women and problematic sexual behavior. By differentiating between different groups of men on a college campus, specifically center athletes, marginal athletes, and nonathletes, this research establishes what kind of sport team participation is associated with hegemonic masculine behaviors, oppressive gender attitudes, and aggressive sexual behavior.

This research extends previous qualitative research on the relationships between male athletic participation, gender attitudes, and sexual behavior. Using original survey data in multivariate models to compare sexual behavior and gender attitudes of men who participate in different collegiate sports with men who do not contributes to the body of research that differentiates between men who do not participate in organized collegiate sports to those who do. This research also contributes to current scholarly debate through its comparison of men participating in different kinds of sports.

Background

Research on male sexual violence has lent support to a possible association between being an athlete, being sexually active, and perpetrating violence against women. When examining the impact of team culture on teenage sexual behavior,

Miller, Sabo, Farrell, Barnes, and Melnick (1998) found that male athletes began having sex earlier, had more partners, and had more sexual encounters than nonathletes. Research has revealed that not only does the sexual behavior of athletes and nonathletes differ but also their propensity for sexual violence. For example, in a study of undergraduate women, athletes were overrepresented in the group of respondents' alleged assailants (Frintner & Rubinson, 1993). Another study on the complaints made to campus police and judicial affairs at 20 universities found that athletes were the alleged assailants at a significantly higher rate than nonathletes (Crosset, Benedict, & McDonald, 1995).

Researchers have also found a link between participation on some sports teams and sexual aggression toward women when looking at different kinds of athletic teams. When asked to categorize athletic teams and fraternities according to the risk levels of the parties they hosted, Humphrey and Kahn (2000) found that students on teams deemed high risk were perceived as more likely to be sexually aggressive and hostile toward women. Similarly, when comparing college-age men who played aggressive sports in high school to a control group, those who had participated in aggressive sports displayed more sexual aggression and coercion toward their dating partners than men in the comparison group (Forbes, Adams-Curtis, Pakala, & White, 2006). Such findings indicate that rather than focusing exclusively on the distinction between the behaviors of athletes versus nonathletes, the distinction between different types of athletic participation deserves more attention.

Qualitative research has provided extensive evidence that norms of masculinity associated with team participation may offer insights into the link between being an athlete and aggressive behavior (McKay et al., 2000; Messner, 1992, 2002; Messner & Sabo, 1990). Research has documented that these norms of masculinity are enforced beyond the team context, informing athletes' behavior outside of the sport setting. For example, prior research reveals that athletes learn to use the model of competition they adopt for their sport as a problem-solving mechanism in their everyday interactions (Sabo, 1980). Other research has found that reinforcement of masculine gender norms through strict football rituals in team practice creates a behavioral repertoire that may be extended to other contexts, with gender norms also informing the interpersonal relationships that athletes form off the field (Sabo & Panepinto, 1990). In an observational study of male athletes in college bars, Curry (2000) found that the masculine ideology enforced in the locker room often carried over into aggressive and risky behavior in social settings.

Based on such qualitative work, researchers have theorized that pressure to conform to team norms of masculinity may lead to aggressive behavior off the field (Curry, 2000). Sports have been highlighted as a site where a unidimensional, hegemonic understanding of masculinity is nurtured, if not mandated (McKay et al., 2000; Messner, 1992, 2002; Messner & Sabo, 1990, 2000). Because of this, team-centered attitudes and activities in sports are now analyzed both as a way to produce athletic advantage as well as from a critical gender perspective. Enforcement of

masculine behavior is a two-edged sword for men. Its contribution to competitive advantage can be accompanied by detrimental effects on male athletes. Restrictive concepts of masculinity, which have been found to flourish in the culture of institutionalized men's sports may have negative, even repressive, effects on young male athletes (Sabo & Runfola, 1980), although recent scholarship suggests that there can be significant differences across different kinds of sports.

Why does the impact of team participation on masculine ideology and aggressive behavior vary across different sports? Messner (2002) contends that one reason is the way that a sport's historical position within society and the university impacts team culture. He argues that there are two major types of collegiate sports: sports close to the institutional center and sports on the margins. Center sports, as Messner (2002) describes them, are those with long traditions within collegiate structures, where norms of masculinity have been entrenched. Because of their historical position in relation to sources of funding, institutional ties, and social tradition, they are isolated from outside regulation and protected from external social control. This allows for hegemonic masculine subcultures within center sports to emerge and flourish. Many center sports, such as football, have become defined by their perpetuation of traditional masculine gender ideology. Messner (2002) contends that because of the high revenue associated with center sports at both the professional and university levels, the media reinforces notions of domination, aggression, and hegemonic masculinity. This leads athletes at all levels to feel pressure to conform to norms of hegemonic masculinity. Because of the money they produce as well as their historical prominence within university culture, center sports are often immune to, or protected against, external sanctions that would otherwise discourage deviant behavior by their athletes.

In Messner's (2002) typology, marginal sports are often nonrevenue sports. Their relatively lowly stature arises from limited power and prestige on campus, which means they are not insulated from pressure to conform to more egalitarian university standards. Because these sports are often peripheral to both the economics and history of universities, athletes who play marginal sports seldom achieve the same prominence that center athletes receive. Hence, a team's position within the institutional hierarchy of sport may be expressed in several ways: the amount of commercial attention and pressures placed on the team, the sport's relationship to the traditional masculine notions correlated with such pressures, and the opportunities individual athletes associated with different types of teams have to exploit their relative advantage as "men about campus." In addition to differences in commercial and university attention given to different sports, center and marginal sports often differ in the values that the sports structure encourages in its athletes. Many center sports, such as football and hockey, are based on dominating, intimidating, and aggressively defeating one's opponent. Many marginal sports, such as tennis or track and field, prioritize individual skill, speed, and strategy over collective domination. Participation in different sports may alter the construct of masculinity

enforced by team culture, as well as the degree of pressure athletes perceive to conform to it.

Building on findings from earlier qualitative research, the present study offers an opportunity to refine understanding of what it is about sports participation that leads to hegemonic masculinity and sexual aggression. This research extends studies that compared athletes and nonathletes to consider participants in different types of sports within the collegiate setting. Its point of departure is to compare center-type sports with sufficient resources (economic and traditions) to preserve hegemonic masculine norms to sports that lack such resources. From this, the following hypotheses are derived:

1. Athletes who play center sports will display more adherence to traditional masculine gender norms than athletes who play marginal sports and nonathletes.
2. The athletes on marginal teams and nonathletes will have more egalitarian concepts of gender than athletes on center teams. Marginal athletes and nonathletes will score lower on the hyper-masculinity violence, danger, and callous sex scales and higher on the egalitarian attitudes toward women scale than center athletes.
3. Athletes who play center-team sports will have higher rates of sexual aggression toward women, lower rates of contraception use, and more sexual partners than athletes who play marginal team sports and nonathletes.

Method

Research Design

To test hypotheses about the differences between athletes in center and marginal sports, this study compares the attitudes and behavior of nonathletes to those of athletes in both center and marginal sports. The center sport used in the analysis is football and the marginal sports are tennis and track and field. With permission from team coaches, data were collected from a football team, a men's tennis team, and a men's track and field team, using self-administered surveys provided at team meetings. All athletes present at the team meetings filled out the survey. The final sample represents the football team (n = 75), the men's tennis team (n = 8), and the men's track and field team (n = 23).

To permit comparison of the attitudes of athletes with the general university population, a purposive sampling strategy was used to acquire data from nonathlete respondents. Students were categorized as nonathletes if they had never played a varsity sport while in college. The survey was administered to men in three undergraduate courses, purposefully selected to maximize variation by capturing students from multiple disciplines. No one contacted in the classes refused to participate (n = 42). A total of 148 respondents, athletes and nonathletes, participated in the survey.

All data were collected at one large public university in the Northeast United States. The teams included in this analysis are all Division I programs, although none is highly ranked. Both the small sample size and the inclusion of respondents from only one university limit the generalizability of the findings.

Distinctions are made between athletes and nonathletes, and in the final model, between center and marginal athletes. In that model, sport participation was recoded, with varsity football players designated center athletes and varsity track and field/ varsity tennis players designated marginal athletes. All other respondents were categorized as nonathletes. Obviously, some respondents from the undergraduate classes may be athletes who participate at a club or intramural level or pursue individual sports, but are treated as nonathletes for purposes of this study.[1] Respondents treated as athletes in this analysis are only those respondents who participate in collegiate sports at a varsity level.

Measurement

Gender role identification. To establish each respondent's identification with traditional gender roles the short form of the Personal Attributes Questionnaire (PAQ) was used (Spence & Helmreich, 1978). The short version of the PAQ is composed of 24 items representing polar attributes. Respondents are asked to locate themselves on a 5-point scale between the two items. The PAQ is divided into three subscales comprised of 8 items each. The Masculinity (M) scale is comprised of items that represent socially desirable characteristics expected most often of men. Cronbach's alpha for the Spence M scale for this sample was 0.74. Similarly, the Femininity (F) scale represents socially desirable characteristics expected of women. Cronbach's alpha for this scale was 0.80. The Masculinity-Femininity (M-F) scale was constructed to assess more polar dimensions of gender. It consists of two types of items: masculine items that are considered desirable for males but not for females and feminine items that are considered desirable for females but not for males (Spence & Helmreich, 1978). The Cronbach's alpha for this sample was 0.57. Scale scores are computed by assigning a value of 0 to 4 to each response, with a 4 indicating highest identification with femininity for the F scale and masculinity for the M and M-F scales. For each scale, total scores range from 0 to 32. A high score indicates a high identification with the construct a subscale is measuring. Sample items from the M, F, and M-F scales, respectively, are, "Not at all independent, Very independent"; "Not at all emotional, Very emotional"; and "Not at all aggressive, Very aggressive."

Attitudes toward women. To evaluate each respondent's attitudes toward women, the short version of Spence and Helmreich's Attitudes Toward Women scale (AWS) was used (Spence, Helmreich, & Stapp, 1973). Respondents were asked to respond to 15 items that aim to capture conformity to traditional concepts of gender roles for

women. Response choices range on a 4-point Likert-type scale from *Agree strongly* to *Disagree strongly*. Possible scale scores range from 0 to 45, with a high score indicating agreement with profeminist attitudes. Examples of scale items are, "Under modern economic conditions with women being active outside of the home, men should share in household tasks such as washing dishes and doing the laundry," and "Women should worry less about their rights and more about becoming good wives and mothers." The short version of the AWS was adapted from Spence and Helmreich's original 55-item scale (Spence et al., 1973). Cronbach's alpha for the AWS for this sample was 0.88.

Hyper-masculinity. Although Spence's PAQ captures each respondent's identification with a broadly defined concept of masculinity, this research seeks to investigate the association between athletic participation and identification with specific aspects of masculine ideology. To investigate respondents' conceptions of masculinity further, the Hyper-masculinity Inventory (HI) was used (Mosher & Sirkin, 1984). Enhancing the information derived from Spence's PAQ, the HI measures a respondent's endorsement of masculine traits that can be perceived as potentially socially negative. The HI aims to measure a "macho" personality constellation consisting of three components: (a) calloused sex attitudes toward women, (b) violence as manly, and (c) danger as exciting (Mosher & Sirkin, 1984). The scale consists of 30 items in which two perspectives of the same topic are presented. Attempting to replicate real-life decision making, respondents are asked to choose one of the two attitudes that most closely represent their own. Scale items for violence, callous sex, and danger, respectively, include (a) "Call me a name and I'll pretend not to hear you," (b) "Call me a name and I'll call you another," (a) "Get a woman drunk, high or hot and she'll let you do whatever you want," (b) "It's gross and unfair to use alcohol and drugs to convince a woman to have sex," and (a) "I'd rather gamble than play it safe," (b) "I'd rather play it safe than gamble." Respondents can receive a score ranging from 0 to 30 on the composite scale and 0 to 10 on each subscale. A high score on the HI scale and each subscale indicates a high identification with the hypermasculinity construct. Construct validity for the HI scale has been established, and HI scores correlate with self-reported drug use, aggressive behavior, and dangerous driving (Mosher & Sirkin, 1984). Cronbach's alpha for the composite scale was 0.84 for this sample. The Cronbach's alpha for the subscales was 0.626 for the Callous Sexual Attitudes Toward Women scale, 0.76 for the Violence as Manly scale, and 0.69 for the Danger as Exciting scale.

Sexual behavior, sexual aggression, and sexual exploitation. Several questions were asked regarding the consensual sexual activity of respondents. Respondents were asked the following questions: "In the past year, how many different people have you had sexual intercourse with?" "In the past year, how many different people have you had oral sex with?" and "In the past year, how many different people have you 'made

out' with?" Six response choices were provided ranging from "none" to "five or more". To capture respondents' use of contraception, they were asked, "How often do you use contraception when having sex?" Response options included: Every time, Almost every time, About half of the time, Less than half of the time, Never, and I do not have sex.

To explore the impact of hyper-masculinity on athletes' behavior off the field, both sexual aggression and sexual exploitation were addressed in the survey. The Sexual Experiences Survey was used to capture respondents' experiences with aggressive sexual behavior (Koss & Oros, 1982). The Sexual Experiences Survey allows a range of coercive sexual activity to be examined, capturing aspects of sexual aggression that are often overlooked. The male scale consists of 12 items. Possible scale scores range from 0 to 12, with a high score indicating a high expression of sexual aggression. Items measured include the following: consensual sexual activity (e.g., "Have you ever had sexual intercourse with a woman when you both wanted to?"), coercive sexual activity (e.g., "Have you ever obtained sexual intercourse by saying things you didn't really mean?"), and sexual aggression (e.g., "Have you ever been in a situation where you used some degree of physical force, twisting her arm, holding her down, and so forth, to try to get a woman to have sexual intercourse with you when she did not want to, but for various reasons, sexual intercourse did not occur?"; Koss & Oros, 1982). Cronbach's alpha for the scale with this sample was 0.51.

Controls. Sexual behavior and attitudes toward women are affected by factors other than athletic participation. To account for these other influences, controls were included for basic demographic factors: age, race, academic major, class year in school, mother's education, and father's education. Fraternity membership was controlled because collegiate fraternities are social institutions that have been identified as enforcing traditional concepts of masculinity, and fraternity membership has been correlated with sexual aggression and negative attitudes toward women (Boeringer, Shehan, & Akers, 1991; Martin & Hummer, 1989; Stombler, 1994). Prior research has found that one important deterrent of risky sexual behavior is religiosity (Beck, Cole, & Hammond, 1991). Consequently, religious involvement was controlled. Religiosity was measured by frequency of religious service attendance. Finally, because the sexual behavior of older siblings has been found to impact sexual behavior of adolescents, controls were included for respondents' number of sisters and brothers (Rodgers, Rowe, & Harris, 1992; Widmer, 1997).

Sample Characteristics

As the descriptive statistics in Table 1 show, there are differences among the three groups of respondents. Both center and marginal athletes are younger and have more sisters and brothers than nonathletes in the sample. Center athletes are more likely than marginal athletes and nonathletes to be Black, whereas marginal athletes and

nonathletes are more likely to be Asian or Hispanic than are center athletes. Athletes, regardless of whether they play in center or marginal sports, are more likely to say they are religious. The athletes in the sample are evenly distributed among class years, whereas the nonathletes are concentrated in the junior and senior years. In terms of fraternity membership, nonathletes and marginal athletes are more likely to belong to a fraternity than center athletes. Finally, center athletes and nonathletes are more likely to have both parents with lower educational attainment compared to marginal athletes.

Analysis

MANCOVA analysis was used to compare the three types of male athletes (center, marginal, and nonathletes). MANCOVA is appropriate when there are categorical groups and a set of correlated dependent variables. In addition, MANCOVA allows for the control of relevant variables that may confound the effects of the independent variables. First, the multivariate effects of the categories of sport participation (center, marginal, and nonathletes) on all of the dependent variables were examined. Then the univariate effects of the categories of sport participation on the dependent variables were examined. Having established that sport participation was a significant predictor of these attitudinal and behavioral outcomes, contrast estimates were used to determine whether the differences between the groups coincide with differences predicted by the hypotheses. Finally, ordinary least squares regression was used to examine the association between masculine gender ideology, attitudes toward women, sexual behavior, and sexual aggression.

Results

Eight of the control variables had no significantly different impact across the groups on gender attitudes and sexual behavior. This may be because of the relative homogeneity of age and life circumstances of university students. Religiosity and Greek involvement were the only control variables with significant effects in the initial model. They were kept in the final model, whereas age, mother's education, father's education, number of sisters, number of brothers, class year, academic major, and race were eliminated.

The overall MANCOVA was significant for respondents' type of sport participation, Pillai's $F(22, 258) = 4.795$, $p < .001$, $\eta^{2=}.31$. Univariate F tests reveal that type of sport participation (nonathlete, marginal athlete, and center athlete) accounts for a significant amount of variation in nearly all of the attitudinal and behavioral dependent variables. Table 2 shows that there were significant differences by type of sport participation for the Spence M scale ($F = 18.64$, $p < .001$, $\eta^{2=}.21$), the Spence M-F scale ($F = 8.12$, $p < .001$, $\eta^{2=}.10$), the Hyper-masculinity Violence Scale

Table 1
Descriptive Statistics for Sociodemographic Characteristics

	Nonathlete $n = 42$	Marginal Sport $n = 31$	Center Sport $n = 75$			
Type of Sport Played	*M*	*M*	*M*	χ^2	*df*	*p*
Age	21.95	20.35	20.18	61.179	38	$p < .01$
Number of sisters	0.80	1.19	1.12	5.665	8	.685
Number of brothers	0.78	1.12	1.09	21.744	10	$p < .05$
Race						
White	76.2	71.0	61.3	9.733	8	.284
Black	11.9	16.1	30.7	9.733	8	.284
Hispanic	11.9	16.1	5.3	9.733	8	.284
Asian	7.1	6.5	1.3	9.733	8	.284
Religious service attendance						
Once a week or more	9.5	9.7	9.3	11.271	10	.337
Two or three times a month	11.9	12.9	12.0	11.271	10	.337
Once a month	2.4	12.9	16.0	11.271	10	.337
Once or twice a year	42.9	38.7	36.0	11.271	10	.337
Never	31.0	19.4	14.7	11.271	10	.337
Class year						
Freshman	7.1	12.9	26.7	26.434	8	$p < .001$
Sophomore	4.8	25.8	26.7	26.434	8	$p < .001$
Junior	33.3	38.7	26.7	26.434	8	$p < .001$
Senior	42.9	19.4	17.3	26.434	8	$p < .001$
5th year or more	11.9	3.2	2.7	26.434	8	$p < .001$

(continued)

Table 1 (continued)

Type of Sport Played	Nonathlete $n = 42$ *M*	Marginal Sport $n = 31$ *M*	Center Sport $n = 75$ *M*	χ^2	*df*	*p*
Fraternity				26.434	8	$p < .001$
Yes	7.1	9.7	1.3	4.147	2	.126
No	92.9	90.3	98.7	4.147	2	.126
Mother's education						
High school or less	45.2	35.5	40.0	9.058	12	.698
Bachelor's degree	31.0	45.2	33.3	9.058	12	.698
Master's Degree, professional degree, or Ph.D.	11.9	16.1	14.7	9.058	12	.698
Father's education						
High school or less	38.1	20.0	41.4	9.128	12	.692
Bachelor's Degree	23.8	43.3	30.7	9.128	12	.692
Master's Degree, professional degree, or Ph.D.	26.2	23.4	16.0	9.128	12	.692
Sport Team embeddedness (% of friends on team)						
0% to 20%		13.3	16.2	23.872	8	$p < .01$
20% to 40%		20.0	5.4	23.872	8	$p < .01$
40% to 60%		13.3	12.2	23.872	8	$p < .01$
60% to 80%		16.7	29.7	23.872	8	$p < .01$
80% to 100%		36.7	36.5	23.872	8	$p < .01$

($F = 15.62$, $p < .001$; $\eta^2 = .19$), the Hyper-masculinity Danger Scale ($F = 5.37$, $p < .01$, $\eta^2 = .07$), the Hyper-masculinity Callous Sexual Attitudes Scale ($F = 5.01$, $p < .01$, $\eta^2 = .07$), the Attitudes Toward Women Scale ($F = 15.87$, $p < .001$, $\eta^2 = .19$), sexual aggression ($F = 4.37$, $p < .05$, $\eta^2 = .06$), and number of partners for kissing ($F = 10.73$, $p < .001$, $\eta^2 = .14$), oral sex ($F = 19.83$, $p < .001$, $\eta^2 = .22$), and intercourse ($F = 12.65$, $p < .001$, $\eta^2 = .16$).

Post hoc contrast results shown in Table 3 reveal that, as hypothesized, center athletes scored significantly higher on the Spence M-F Scale, all three Hyper-masculinity scales, and sexual aggression than marginal athletes. Center athletes also scored significantly lower on the Attitudes Toward Women Scale than marginal athletes, displayed more sexual aggression, and had more kissing, oral sex, and intercourse partners. When center athletes were compared to nonathletes, the results also support the hypotheses. Center athletes scored significantly higher than the nonathletes on the Spence M and M-F scales, sexual aggression, and the Hyper-Masculinity Violence Scale, and significantly lower on the Attitudes Toward Women Scale. Center athletes also had significantly more kissing, oral sex, and intercourse partners than nonathletes. When the marginal athletes were compared to the nonathletes, they scored significantly higher on the Spence M scale and significantly lower on the Hyper-masculinity Callous Sexual Attitudes Scale and the Attitudes Toward Women Scale.

Finally, multiple regression was used to examine the association between respondents' gender ideologies and their behavior. Table 4 presents the results of ordinary least squares regression. After controlling for type of sport played, religious service attendance, and fraternity membership, there are significant associations between gender identity, attitudes toward women, sexual behavior, and sexual aggression. Identification with the Spence M Scale was positively associated with respondents' number of intercourse partners, whereas identification with the Spence M-F Scale was positively associated with respondents' attitudes toward women and negatively associated with number of kissing partners. Similarly, identification with the Spence F Scale was positively associated with respondents' attitudes toward women. Identification with both the Hyper-masculinity Violence and Danger Scales was negatively associated with respondents' attitudes toward women, and identification with Hyper-masculinity Danger and Callous Sexual Attitudes Scales was positively associated with number of kissing, oral sex, and intercourse partners.

Discussion

The goal of this research was to understand better the relationship between athletic involvement and collegiate men's gender identity, attitudes toward women, sexual behavior, and sexual aggression. Beyond establishing an association between athletic participation and these outcomes, the goal of this research was to understand if this relationship differs across sport teams.

Table 2
MANCOVAs by Type of Athlete on Gender Constructs, Attitudes Toward Women, and Sexual Behavior

	Nonathlete	Marginal Athlete	Center Athlete		
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	Univariate *F*	χ^2
Attitudes					
Spence M	20.70 (4.286)	24.32 (3.506)	25.55 (3.951)	18.64***	.21
Spence M-F	17.43 (3.922)	17.65 (4.119)	19.83 (3.607)	8.12***	.10
Spence F	21.75 (3.719)	22.77 (4.047)	22.50 (4.596)	0.58	.01
Hyper-Masculinity					
Violence	3.95 (2.385)	3.52 (2.631)	6.03 (2.559)	15.62***	.19
Danger	3.83 (2.206)	3.03 (2.008)	4.34 (1.817)	5.37**	.07
Callous Sexual Attitudes	1.90 (1.905)	1.19 (1.138)	2.04 (1.256)	5.01**	.07
Attitudes Toward Women	56.98 (8.957)	51.97 (10.625)	45.83 (9.488)	15.87***	.19
Behaviors					
Sexual aggression	1.60 (1.172)	1.55 (1.362)	2.00 (1.021)	4.37*	.06
Number of partners					
Kissing	2.28 (1.782)	2.36 (1.582)	3.51 (1.700)	10.73***	.14
Oral sex	1.23 (1.290)	1.32 (1.194)	2.83 (1.677)	19.83***	.22
Intercourse	1.25 (1.432)	1.55 (1.524)	2.84 (1.716)	12.65***	.16
Contraception Use					
(2 = almost every time)	2.30 (1.682)	2.16 (1.846)	2.10 (1.505)	0.32	.01

Note: M = masculine; F = feminine.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 3
Post Hoc Tests Contrasting Participation in Center Sports, Marginal Sports, or No Sport Participation on Attitudinal and Behavioral Constructs

	Marginal Athletes vs. Nonathletes[a]	Center Athletes vs. Nonathletes[a]	Marginal Athletes vs. Center Athletes[a]
Attitudes			
Spence M	3.649***	4.862***	–1.213
Spence M-F	0.277	2.721***	–2.444**
Spence F	1.038	0.727	0.311
Hyper-Masculinity			
Violence Scale	–0.327	2.234***	–2.561***
Danger Scale	–0.775	0.623	–1.398**
Callous Sexual Attitudes Scale	–0.686*	0.291	–0.977**
Attitudes Toward Women	–4.712*	–10.668***	5.957**
Behaviors			
Sexual aggression	0.021	0.548*	–0.569*
Number of partners			
Kissing	0.136	1.385***	–1.249**
Oral sex	0.133	1.655***	–1.522***
Intercourse	0.058	1.403***	–1.346***
Contraception use	–0.240	–0.239	0.000

Note: M = masculine; F = feminine.
a. Contrasts are simple, reference category is second.
*$p < .05$. **$p < .01$. ***$p < .001$.

In doing so, results reveal that it is not just athletic participation of any sort that is associated with male athletes' conformity to traditional masculinity norms, rates of sexual aggression, increased sexual behavior, or more negative attitudes toward women. The results indicate that type of sport played has an impact on these outcome variables. All male athletes, both marginal and center, scored higher on the Masculinity Scale and lower on the Attitudes Toward Women Scale than their nonathletic peers. However, when analyzing the association between athletic status and the other attitudinal and behavioral variables, important distinctions emerged between types of sport played rather than simply between nonathletes and athletes.

When comparing nonathletes and marginal athletes, there were few significant differences. Nonathletes were significantly more positive in their attitudes toward women when compared to the marginal athletes. Marginal athletes actually scored significantly lower than nonathletes on the Callous Sexual Attitudes Hypermasculinity Scale. Otherwise, nonathletes and marginal athletes appear to be very similar. There were no significant differences between marginal athletes and nonathletes in their responses to the Hyper-Masculinity Violence and Danger Scales, rates of sexual aggression, or number of kissing, oral sex, and intercourse partners.

Table 4
Unstandardized Coefficients (Standard Errors) for Ordinary Least Squares Regression Analysis of Sociodemographic Characteristics and Gender Attitudes on Behavioral Dependent Variables

	Attitudes Toward Women	Sexual Aggression	Number of Kissing Partners	Number of Oral Sex Partners	Number of Intercourse Partners	Contraception Use
Type of sport played						
Nonathlete	2.836	–.379	–1.094	–1.416	–.700	0.104
	(2.028)	(0.26)	(.359)**	(.342)***	(.356)	(.375)
Marginal athlete	9.781	–.232	–.686	–1.130	–.716	–.103
	(2.023)***	(.260)	(.359)	(.341)**	(.355)*	(.375)
Sociodemographic variables						
Religious service attendance	1.322	.091	.183	.096	.095	–.228
	(4.59)**	(.059)	(.081)*	(.077)	(.080)	(.086)**
Fraternity involvement	–1.818	.796	–.309	.329	.230	–1.288
	(3.479)	(.444)	(.613)	(.583)	(.599)	(.639)*
Attitudinal variables						
Spence M	0.055	–.037	0.05	0.03	0.081	0.005
	(.219)	(.028)	(.039)	(.037)	(.032)*	(.041)
Spence M-F	.455	.038	–.086	–.071	–.022	–.070
	(.225)*	(.029)	(.040)*	-(.038)	(.040)	(.042)
Spence F	.528	.020	.023	–.006	.020	.022
	(.184)**	(.024)	(.033)	(.031)	(.032)	(.036)
Hyper-Masculinity						
Violence Scale	–.824	.074	.028	.010	–.027	–.001
	(.337)*	(.044)	(.061)	(.058)	(.058)	(.063)
Danger Scale	–1.043	.065	.251	.162	.179	–.079
	(.416)*	(.053)	(.074)**	(.070)*	(.073)*	(.077)
Callous Sexual Attitudes Scale	–1.136	0.07	0.302	0.255	0.324	.168
	(.579)	(.074)	(.102)**	(.097)**	(.100)**	(.107)

The most interesting distinctions emerged not in the comparisons of the athletes to the nonathletes but in the comparison of marginal athletes and center athletes. Center athletes scored significantly higher on all three Hyper-Masculinity scales (violence, danger, callous sexual attitudes), as well as on the Spence M-F Scale when compared to marginal athletes. Center athletes were also significantly more likely to display sexual aggression and have more kissing, oral sex, and intercourse partners than the marginal athletes. These trends indicate that it may not be simply varsity sport participation but rather the type of sport played that has an important relationship with the attitudes and behavior of male athletes.

Although these results indicate an important relationship between type of athletic participation and the sexual behavior and gender ideology of male athletes, the results should be interpreted with some caution. Because of the small, nonrepresentative sample, the results may not be generalizable to other sports teams, or athletes at other kinds of universities. Future research should expand on this study and seek to replicate these findings with larger samples. Second, because of the use of cross-sectional data, these findings cannot speak to causality. Future research should employ longitudinal designs to further unpack the causal order of these associations.

However, these findings are important for understanding the role of varsity sports participation on college-age men's behavior for at least two reasons. First, by including measures of gender ideology, sexual behavior, and sexual aggression, this research promotes more nuanced understanding of the relationship between hegemonic masculinity, attitudes toward women, and violence against women. Past research has not often explored both gender ideology and sexual behavior to improve insight into the relationship between concepts of masculinity and sport team culture or the relationships between being an athlete and sexual violence against women. By including gender ideology and measures of aggression toward women in a single research design, this research showed that sports teams whose athletes identify strongly with the hyper-masculinity construct are also the teams that have athletes who reveal the most sexual aggression.

Second, the comparative design of this research reveals that rather than distinguishing athletes from nonathletes, a more meaningful distinction may be in the type of sport played. Although marginal athletes and nonathletes appeared to be very similar, the athletes who played center sports displayed distinctively more hypermasculinity and sexual aggression than the other men in the sample.

Although this research reveals differences between the attitudes regarding gender and sexual behavior of athletes who play different kinds of sports, it does not explain why participation in these sports affects athletes' attitudes and behavior differently. There are several possible explanations for the variation in sport team culture that should be examined in future research. First, there may be a recruitment effect. Different sports may have recruitment processes that favor men with systematic preexisting differences in acceptance of hegemonic masculinity and aggression. Perhaps men who are aggressive are more attracted to sports in which the game is built around

aggressively dominating one's opponent. Because many successful collegiate athletes are recruited from very sophisticated high school athletic programs, drawing distinctions between individual attributes and learned sport culture is difficult.

Extensive qualitative research suggests that even if there is a recruitment effect, the culture of center sports cultivates more traditionally masculine norms. Messner (2002) contends that center sports foster behavior such as sexual talk and dominance bonding, perception of women as objects of conquest, and team voyeurism as part of the conquest, suppression of empathy, and a culture of silence that may lead directly to athletes' involvement in sexual violence. This theoretical framework contends that mechanisms within certain athletic institutions encourage hegemonic masculinity and aggression toward women through the sport culture.

Messner's (2002) theory of the effects of the structure of collegiate sports suggests that the insulation of center sports from social controls may be a factor that enables the macho culture to persist. Sports such as football, basketball, and hockey have become big business for some universities and provide an institutional and cultural space that often seems to insulate their participants from external behavioral norms and sanctions. Although advances in the feminist movement have rendered certain behaviors unacceptable in the general university culture, center sports may be buffered from the pressure to adapt to the changing social climate. The infrastructure surrounding center sports seems to allow them to continue to maintain hypermasculine ideology, often with apparent impunity. The mechanisms that contribute to these differences across sports should be examined in future research.

The structures of sports also vary in key ways that may influence the team cultures. The degree to which female athletes are incorporated into male athletes' day-to-day routines may affect their conceptions of gender and sexual behavior. Although some sports, such as football, have historically excluded women, other sports, such as tennis, are more gender inclusive. The amount of interaction between men's and women's teams at shared facilities, practice spaces, buses to competition, and social activities may be key variables in understanding differences among male athletes. Also, distinctions among sports such as contact, noncontact, and team versus individual competition may be important in understanding what about team culture leads to these differences among athletes. Future research should include more sports teams to allow for examination of these distinctions.

Although it was not an issue explored in this research, there is reason to believe that the impact of center and marginal sport participation may vary across different kinds of schools. A limitation of this research was that the data were collected from three sports teams at one Division I public university that does not have a highly ranked athletic program. Messner's (2002) conception of center sports implies that highly ranked and endowed athletic teams will be more insulated from external sanctions than teams that do not have as successful records. This suggests that these findings may actually underestimate differences between center and marginal athletes and center and nonathletes at schools with elite, competitive center sports teams. To

examine this more fully, future research should include athletes from universities with varying degrees of success in their particular center and marginal sports programs and should include a wider array of sports teams in the sample to elucidate fully how differences between center and marginal sports may contribute to gender attitudes and sexual behavior.

Note

1. I ran an alternative model eliminating all respondents who identified themselves as playing any sport at a varsity, intramural, or club level from the nonathlete category; the model showed no significant variation from this model.

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