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## Differences in Adolescent Relationship Abuse Perpetration and Gender-Inequitable Attitudes by Sport Among Male High School Athletes

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### A B S T R A C T

**Purpose:** School-based athletic programs remain an important context for violence prevention efforts although a better understanding of how gender attitudes and abuse perpetration differ among athletes is needed.

**Methods:** We analyzed baseline survey data from the “Coaching Boys into Men” study—a school-based cluster-randomized trial in 16 high schools in Northern California. We describe relationships among gender-inequitable attitudes, sport type, and recent adolescent relationship abuse perpetration among a sample of male athletes ( $n = 1,648$ ).

**Results:** Gender-inequitable attitudes (adjusted odds ratio (AOR), 3.26; 95% confidence interval (CI), 2.56, 4.15), participation in both high school football and basketball (AOR, 2.08; 95% CI, 1.37, 3.18), and participation in football only (AOR, 1.50; 95% CI, 1.02, 2.22) emerged as independently associated with recent ARA perpetration.

**Conclusions:** Findings warrant targeted violence prevention efforts among male high school athletes that incorporate discussions of gender attitudes and healthy relationships, especially among sports teams at greater risk of adolescent relationship abuse perpetration.

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### IMPLICATIONS AND CONTRIBUTION

Differences in sport participation may relate to variation in ARA. Among a sample of high school athletes, boys who played both football and basketball or football only were more likely than other boys to abuse their dating partners, controlling for gender-inequitable attitudes. Targeted efforts to promote healthy relationships among youth are needed.

Adolescent relationship abuse (ARA)—physical, sexual, and psychological abuse in adolescent romantic, dating, or intimate relationships—is experienced by as many as one in three youth [1]. School-based athletic programs remain an important context for ARA prevention, given athletes' influence on their peers. Past research suggests that college athletes hold attitudes supportive

of the use of violence in relationships, with evidence that these attitudes may differ by sport [2–4]. Participation in aggressive or heavy contact sports (such as football, basketball, wrestling, and soccer) may be associated with ARA perpetration, influenced by gendered attitudes that encourage males to demonstrate physical strength and the perception that peers condone aggressive and abusive behavior on and off the field [4–6]. As ARA begins in early adolescence, elucidating gender attitudes and their relationship to abuse perpetration among young male athletes in specific sports may inform strategies to target youth at greater risk for ARA perpetration.

**Conflicts of Interest:** The authors have no conflicts of interest to report.

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## Methods

We analyzed cross-sectional, baseline survey data from the “Coaching Boys into Men” study, a school-based cluster-randomized trial in 16 high schools in Northern California that has been described elsewhere [7]. The current sample consisted of 1,648 male high school athletes who indicated that they had ever been in a heterosexual dating relationship defined as “a relationship with a girl (meaning she was your girlfriend, you were dating or going out with her) for more than a week” and provided complete data on ARA. Participants were asked about perpetrating any of the 10 abusive behaviors (including physical, sexual, and emotional abuse) toward a female partner in the past 3 months. Measures were modified from the Conflict Tactics Scale-2 [8], with additional items developed and tested in a separate pilot study (Cronbach’s  $\alpha = .69$ ). Those endorsing at least one behavior were classified as having perpetrated recent abuse. Participants’ gender-inequitable attitudes were assessed via 11 questions modified from the Gender-Equitable Norms Scale (Cronbach’s  $\alpha = .76$ ) [9]. Responses were on a five-point Likert scale; a mean of the 11 items was calculated with a higher score representing less equitable gender attitudes. Demographics included current grade, race/ethnicity, maternal and paternal education, and whether or not participants were U.S. born. Participants reported their involvement in basketball, football, soccer, volleyball, wrestling, baseball, track and field/cross country, swimming, tennis, and golf. Participants could indicate if they participated in more than one sport.

The prevalence of ARA was calculated for the total sample by demographics (Table 1) and each sport (Table 2). Mean differences in gender-inequitable attitudes were assessed via linear regression for clustered data comparing athletes competing in a particular sport with all other athletes. Unadjusted and adjusted logistic regression models assessed the associations of abuse perpetration with type of sports participation. As football and basketball had the highest prevalence of abuse perpetration, the final model assessed the relative associations of ARA perpetration and playing (1) football and basketball; (2) basketball only; and (3) football only compared with athletes in all other sports (Table 2). All analyses accounted for school-level clustering [7] with adjusted models controlling for demographics and gender-inequitable attitudes. Analyses were conducted in SAS, v9.3. Procedures were approved by Human Subjects Committees at the University of California, Davis, the Harvard School of Public Health, and the University of Pittsburgh.

## Results

Sample characteristics are listed in Table 1. Compared with other student athletes, football players ( $p = .002$ ) and basketball players ( $p < .0001$ ) held more gender-inequitable attitudes, whereas wrestlers ( $p = .01$ ), swimmers ( $p < .0001$ ), and tennis players ( $p = .009$ ) held more equitable gender attitudes. In the final adjusted model, boys who played both football and basketball (AOR, 2.08; 95% confidence interval (CI), 1.37, 3.18) and those who played football only (AOR, 1.50; 95% CI, 1.02, 2.22) were more likely to have recently abused a dating partner as compared with boys in all other sports. Moreover, athletes who held more gender-inequitable attitudes were significantly more likely to report recent abuse perpetration (AOR, 3.26; 95% CI, 2.56, 4.15) compared with those holding less inequitable attitudes (Table 2).

**Table 1**

Demographic characteristics of the sample ( $n = 1,648$ ) and abuse perpetration reported by these demographic groups

	Total ( $n = 1,648$ )	Any recent abuse perpetration ( $N = 276$ )	No recent abuse perpetration ( $n = 1,372$ )
	% (N) <sup>a</sup>	% <sup>a,b</sup> (N)	% <sup>a,b</sup> (N)
Grade			
9th	23.4 (385)	11.9 (46)	88.1 (339)
10th	25.1 (414)	15.2 (63)	84.8 (351)
11th	24.1 (397)	15.6 (62)	84.4 (335)
12th	26.3 (434)	24.0 (104)	76.0 (330)
Wald log linear $\chi^2$ $p$ value			.03
Race			
White	32.2 (531)	11.3 (60)	88.7 (471)
Non-Hispanic Black	23.7 (391)	27.6 (108)	72.4 (283)
Hispanic	19.8 (327)	14.4 (47)	85.6 (280)
Asian	7.7 (127)	11.8 (15)	88.2 (112)
Native American or Pacific Islander	5.04 (83)	13.3 (11)	86.8 (72)
Other	10.4 (171)	19.3 (33)	80.7 (138)
Wald log linear $\chi^2$ $p$ value			.01
Parental education			
Some high school	4.6 (76)	17.1 (13)	82.9 (63)
High school graduate	17.5 (289)	18.3 (53)	81.7 (236)
Some college/technical school	25.9 (426)	17.4 (74)	82.6 (352)
College graduate	26.8 (442)	15.2 (67)	84.8 (375)
Completed graduate school	13.8 (228)	16.7 (38)	83.3 (190)
N/A	11.4 (187)	16.6 (31)	83.4 (156)
Wald log linear $\chi^2$ $p$ value			.85
U.S. born			
Yes	91.2 (1,503)	17.4 (261)	82.6 (1,242)
No	7.4 (122)	8.2 (10)	91.8 (112)
Wald log linear $\chi^2$ $p$ value			.008

<sup>a</sup> Percentages may not equal 100% due to small amounts of missing data.

<sup>b</sup> Row percentage;  $\chi^2$   $p$  values are from Wald tests adjusted for clustered survey design.

In our sample of high school male athletes, boys who played both football and basketball and boys who played only football were significantly more likely than boys participating in other sports to have recently abused their female dating partners. These associations persisted after controlling for players’ gender attitudes, which were also greatest among athletes in these two sports. Gender-inequitable attitudes were a strong independent predictor of abuse perpetration; boys who held gender-inequitable attitudes were more than three times more likely than other boys to perpetrate abusive behaviors against their female dating partners. In addition to gender attitudes, findings suggest that there may be factors unique to basketball and football teams (and the potentially compounding influence of participating in both sports) such as the social status of participating in revenue-generating sports, media portrayals of abuse perpetration by professional athletes, and the peer context that supports hypermasculine behavior [6] that contributes to greater likelihood of perpetrating dating abuse. It is also possible that this association is confounded by self-selection into these sports, warranting attention to attitudes and other ARA risk factors among youth before they reach high school.

These findings indicate violence prevention efforts with athletes remain necessary to shift gender attitudes and prevent ARA. A recent evaluation of the violence prevention program “Coaching Boys into Men” found that athletes who received violence prevention messages from their coaches were less likely to abuse their dating partners 1 year later [10]. This is promising evidence

**Table 2**

Sports team participation, gender-inequitable attitudes, and their association with recent ARA perpetration (n = 1,648)

	Total	Gender-inequitable attitudes	Any recent abuse perpetration	Unadjusted associations of sports team with recent ARA <sup>a</sup>	Adjusted associations of sports team with recent ARA <sup>b</sup>
	N <sup>c</sup>	Mean (SE)	% (n) <sup>d</sup>	AOR (95% CI)	AOR (95% CI)
Basketball	311	<b>3.15 (.06)**</b>	24.1 (75)	<b>1.80 (1.36, 2.38)**</b>	1.26 (.97, 1.64)
Football	864	<b>3.06 (.06)**</b>	21.2 (183)	<b>2.00 (1.49, 2.68)**</b>	<b>1.52 (1.15, 2.00)*</b>
Soccer	223	2.94 (.07)	10.8 (24)	<b>.56 (.33, .95)*</b>	.66 (.38, 1.12)
Wrestling	183	<b>2.84 (.05)*</b>	15.9 (29)	.93 (.65, 1.32)	1.19 (.72, 1.97)
Baseball	319	2.98 (.05)	16.9 (54)	1.02 (.72, 1.43)	1.02 (.78, 1.33)
Volleyball	69	2.96 (.14)	8.7 (6)	<b>.88 (.79, .98)*</b>	.88 (.77, 1.00)
Track and field/cross country	307	2.93 (.09)	16.3 (50)	.96 (.66, 1.40)	.92 (.66, 1.29)
Swimming	41	<b>2.59 (.09)**</b>	9.8 (4)	.53 (.13, 2.15)	1.03 (.27, 3.92)
Tennis	59	<b>2.75 (.09)*</b>	6.8 (4)	<b>.35 (.14, .90)*</b>	.50 (.15, 1.65)
Golf	39	3.00 (.13)	23.1 (9)	1.51 (.95, 2.40)	1.51 (.73, 3.15)
Final model	Total	Gender-inequitable attitudes	Any recent abuse perpetration	Unadjusted associations of sports team with recent ARA <sup>c</sup>	Adjusted associations of sports team with recent ARA <sup>d</sup>
	N	Mean (SE)	% (n) <sup>b</sup>	AOR (95% CI)	AOR (95% CI)
Gender-inequitable attitudes				–	<b>3.26 (2.56, 4.15)**</b>
Sport					
Football + basketball	171	<b>3.13 (.08)**</b>	27.5 (47)	<b>3.38 (2.16, 5.28)**</b>	<b>2.08 (1.37, 3.18)**</b>
Basketball only	140	<b>3.18 (.05)**</b>	20.0 (28)	<b>2.23 (1.27, 3.92)*</b>	1.23 (.67, 2.27)
Football only	693	<b>3.05 (.06)**</b>	19.6 (136)	<b>2.18 (1.49, 3.18)**</b>	<b>1.50 (1.02, 2.22)*</b>
Neither football nor basketball (i.e., all other athletes)	644	<b>2.84 (.04)**</b>	10.1 (65)	<b>-Ref-</b>	<b>-Ref-</b>

ARA = adolescent relationship abuse; CI = confidence interval; Ref = reference; SE = standard error.

<sup>a</sup> Unadjusted models account for within-school clustering.<sup>b</sup> Adjusted models adjust for demographic characteristics, gender-inequitable attitudes (>mean represents more inequitable attitudes), and account for within-school clustering.<sup>c</sup> Total N sum to greater than 1,648 across sports due to athletes reporting that they participated in more than one sport.<sup>d</sup> Row percentage.\*  $p < .05$ .\*\*  $p < .001$ .

that reduction of abuse perpetration is possible among male athletes, and that adult allies, including coaches, working with adolescent athletes may be in a position to influence behaviors of youth. From a clinical perspective, sports medicine professionals working with adolescents may consider incorporating relationship discussions into clinical encounters with young athletes.

In addition to possible selection bias, this study should be interpreted in light of several limitations, including the cross-sectional nature of the data and social desirability bias. Future research should include additional sports, such as ice hockey, not included in the present study. These limitations notwithstanding, findings suggest that ARA prevention efforts among male high school athletes may benefit from additional focus on gender attitudes and should especially target sports, such as football and basketball, with the least equitable attitudes and greatest prevalence of ARA perpetration.

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