

Gender-Equitable Attitudes, Bystander Behavior, and Recent Abuse Perpetration Against Heterosexual Dating Partners of Male High School Athletes

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Adolescent relationship abuse among heterosexual youths is common, with 20% to 25% of adolescents reporting this exposure.^{1,2} Adolescent relationship abuse is a gendered exposure. Although adolescent boys report experiencing aggression or physical violence from their female dating partners,³ women and girls are more likely to experience such violence, particularly sexual assault, and to experience poor health as a result.^{4,5} This disparity has been attributed to social norms supportive of male dominance in sexual and dating relationships, normalization of the use of violence as a means of conflict resolution, and the perception that peers support aggressive and abusive behavior.^{6,7}

Gender-equitable norms (socially prescribed definitions of masculinity and equitable power in sexual relationships) have been recognized by the global health community as a critical component of violence prevention.^{8,9} A small body of literature has empirically tested the association of such attitudes with adolescent relationship abuse^{10,11} and adult intimate partner violence.¹² Although attitudes that degrade women and legitimize violence have been shown to be modifiable in men,^{12–16} limited attention has been paid to addressing norms in the context of dating violence among adolescents.

Recent work in the field has focused on the social context of violence by attempting to alter the behavior of men and boys when they witness peers perpetrating physical–sexual abuse, rather than targeting the behavior of individual perpetrators. This bystander intervention approach aims to help witnesses better recognize abusive behaviors and take responsibility to stop them.^{17–19} Early bystander intervention programs incorporated conversations about masculinity and power into their curricula, the most

Objectives. We assessed the relationship between gender attitudes, identified as a critical component of violence prevention, and abuse toward dating partners among adolescent male athletes.

Methods. Our sample comprised 1699 athletes from 16 high schools in northern California who were surveyed between December 2009 and October 2010 in the larger Coaching Boys Into Men trial. We used logistic regression to assess the association between gender-equitable attitudes, bystander behavior, and recent abuse incidents.

Results. Athletes with more gender-equitable attitudes and greater intention to intervene were less likely (adjusted odds ratio [AOR] = 0.36; 95% confidence interval [CI] = 0.28, 0.46; and AOR = 0.60; 95% CI = 0.48, 0.75, respectively) and athletes who engaged in negative bystander behavior were more likely (AOR = 1.22, 95% CI = 1.10, 1.35) to perpetrate abuse against their female dating partners.

Conclusions. Despite the shift among bystander intervention programs toward gender neutrality, our findings suggest a strong association between gender attitudes and dating violence. Programs designed for adolescents should include discussion of gender attitudes and target bystander behavior, because these components may operate on related but distinct pathways to reduce abuse. (*Am J Public Health*. Published online ahead of print August 15, 2013; e1–e6. doi:10.2105/AJPH.2013.301443)

notable of which was designed for male high school and college athletes.²⁰ The athletic context provided a unique opportunity to implement gender-transformative programming within a culture influenced by discourses of masculinity and power, and the program encouraged athletes to model respectful behavior for peers in the greater school community. Today, discussions of gender norms are largely absent from bystander intervention programs so as not to target individual perpetrators.²⁰ Such gender-neutral programs consider the impact of power imbalances on violence, but the underlying causes of these imbalances are less clearly articulated.

In light of the shift in bystander intervention programs toward gender neutrality,²⁰ despite evidence that sexual violence and harassment are influenced by social norms

regarding relationships and masculinity,²¹ we empirically examined the relationships between gender-equitable attitudes, bystander behavior, and abuse toward heterosexual dating partners among a sample of male high school athletes.

METHODS

Data came from a school-based, randomized controlled trial, Coaching Boys Into Men, a dating violence prevention program for male student athletes. Sixteen high schools from 4 school districts in Sacramento County, California, agreed to participate and were randomized evenly to the program or a wait-list control condition. Trial participation was offered to all boys' and coeducational sports teams of participating schools; 87% of coaches and 59% of athletes agreed to participate. All athletes on

participating teams who provided youth assent and parental consent were eligible. Participation in the study did not influence their ability to participate on their sports team. Most coaches who declined participation were from basketball programs and cited lack of time as their primary reason for nonparticipation. Athletes who did not participate were primarily from football, basketball, and baseball teams, and their nonparticipation largely stemmed from lack of parental consent. Prior to program implementation, participants completed a 15-minute anonymous computer survey about knowledge of abuse, attitudes and beliefs about relationships, self-reported perpetration of abuse, witnessing abuse in school, and bystander behavior. Students received a \$10 gift card at the completion of the survey thanking them for their time.

We used baseline data from the Coaching Boys Into Men study ($n = 2092$) collected between December 2009 and October 2010. We excluded from analysis male athletes who reported that they had never been in a heterosexual dating relationship ($n = 307$) and all female athletes ($n = 86$), yielding a sample of 1699 adolescent boys clustered in 16 schools.

Measures

The survey asked athletes who reported ever being in a heterosexual dating relationship ($n = 1699$) about engaging in any of 9 abusive behaviors (incorporating physical, sexual, and emotional abuse) toward a female partner in the past 3 months. The survey was a modification of the Conflict Tactics Scale 2,²² with additional items created and tested during a separate pilot study.²³ The survey described a dating relationship as “a relationship with a girl (meaning she was your girlfriend, you were dating or going out with her) for more than a week.” We generated three dichotomous outcome variables to represent any recent perpetration of (1) any abuse, (2) physical–sexual abuse, or (3) emotional abuse.

To assess participants gender attitudes, the survey presented respondents with 11 questions modified from the Gender-Equitable Norms Scale (Cronbach $\alpha = 0.76$).²⁴ Items included statements such as “Girls try to get pregnant to trap boys into relationships,” “Boys don’t usually intend to force sex (like holding down or using physical strength) on a girl but sometimes they can’t help it,” and “It bothers

me when a boy acts like a girl.” Responses ranged from strongly agree to strongly disagree on a 5-point scale. We calculated the mean of the 11 items, with a higher score representing more gender-equitable attitudes.

Eight items assessed intention to intervene in various scenarios (Cronbach $\alpha = 0.87$). Participants were asked, “How likely are you to do something to try and stop what’s happening if a male peer or friend of yours is . . .” with behaviors that included, “making rude or disrespectful comments about a girl’s body, clothing, or makeup,” “doing unwelcome or uninvited things towards a girl (or group of girls) such as howling, whistling, or making gestures,” and “shoving, grabbing, or otherwise physically hurting a girl.” Responses, on a 5-point scale, ranged from very unlikely to very likely. A summary variable indicated the mean of the 8 items, with a higher score indicating greater likelihood to intervene.

The survey asked participants to indicate whether they witnessed 9 abusive behaviors perpetrated by their peers in the past 3 months. Similar to items assessing intention to intervene, these investigator-developed items were piloted in a previous mixed-methods study²³ to identify commonly witnessed behaviors among adolescent male athletes and their responses to those behaviors. To assess actual bystander intervention, respondents indicated what they did in response to each witnessed behavior. Positive bystander behaviors were (1) “I told the person in public that acting like that was not okay,” (2) “I told the person in private that acting like that was not okay,” (3) “I talked to our coach about it privately,” and (4) “I talked to another adult (not coach).” The negative bystander behaviors were (1) “I didn’t say anything” and (2) “I laughed at it or went along with it.” For each abusive behavior, we created separate binary indicators for any positive and for any negative bystander behavior. If an abusive behavior was not witnessed, we coded both indicators zero. We then summed these indicator variables to form positive and negative bystander intervention scores, which ranged from 0 (no positive or negative intervention) to 9 (engaged in positive or negative bystander behavior in all 9 cases).

We collected demographic information on current grade, race/ethnicity, level of education completed by respondent’s mother and father, and whether respondent was born in the

United States. Participants also indicated their involvement in 1 or multiple team sports: basketball, football, soccer, volleyball, wrestling–weight lifting, baseball, track and field–cross-country, swimming, tennis, and golf.

Analysis

We calculated frequencies of demographic characteristics and tested differences in recent abuse perpetration across demographic characteristics by using the χ^2 test; we set significance for all analyses at $P < .05$. We calculated frequencies for individual abuse items and for physical–sexual abuse and emotional abuse summary categories. We used crude and adjusted logistic regression models to test the associations of predictors (gender-equitable attitudes, intention to intervene, positive bystander intervention, and negative bystander intervention) with recent abuse. We restricted positive and negative bystander intervention models to participants who reported witnessing at least 1 abusive event in the past 3 months ($n = 1284$).

We specified logistic regression models for clustered survey data to account for school-level clustering and controlled for sport, grade, race, parental education, and immigrant status. We conducted all statistical analyses in SAS version 9.2 (SAS Institute, Cary, NC).

RESULTS

Sixteen percent of these young male athletes reported engaging in abusive behavior in the past 3 months, with 5% ($n = 81$) and 14% ($n = 243$) reporting physical–sexual and emotional abuse, respectively. The most commonly reported physical–sexual abuse was “convincing her to have sex after she had said no a few times,” and the most common emotional abuse was “calling her names like ugly or stupid.” In the total sample, we observed differences by grade, racial/ethnic group, and immigrant status. Older student athletes, African Americans, and student athletes born in the United States were more likely than others to report perpetrating abuse (Table 1). We also found differences in demographic characteristics between athletes who did and did not witness peer abuse (results not shown). Witnesses of peer abuse were more likely than other respondents to be White, have parents who completed college, and be in the 11th or 12th grade.

TABLE 1—Demographic Characteristics of Sample of Male High School Athletes and Recent Abuse Perpetration Toward Heterosexual Dating Partners: Coaching Boys Into Men Trial, California, 2009–2010

| Characteristic | Total (n=1699), ^a No. (%) | Any Abuse, No. (%) ^b | P | Physical-Sexual Abuse, No. (%) ^b | P | Emotional Abuse, No. (%) ^b | P |
|----------------------------------|---|------------------------------------|-------|--|-------|--|-------|
| Total sample | | 276 (16.2) | | 81 (4.8) | | 243 (14.3) | |
| Grade | | | <.001 | | 0.62 | | <.001 |
| 9 | 393 (23.1) | 46 (11.7) | | 16 (4.1) | | 35 (8.9) | |
| 10 | 429 (25.3) | 63 (14.7) | | 23 (5.4) | | 54 (12.6) | |
| 11 | 413 (24.3) | 62 (15.0) | | 17 (4.1) | | 57 (13.8) | |
| 12 | 446 (26.3) | 104 (23.3) | | 25 (5.6) | | 96 (21.5) | |
| Race/ethnicity | | | <.001 | | <.001 | | <.001 |
| White | 551 (32.4) | 60 (10.9) | | 15 (2.7) | | 52 (9.4) | |
| Non-Hispanic Black | 403 (23.7) | 108 (26.8) | | 35 (8.7) | | 96 (23.8) | |
| Hispanic | 339 (20.0) | 47 (13.9) | | 16 (4.7) | | 39 (11.5) | |
| Asian | 131 (7.7) | 15 (11.5) | | 2 (1.5) | | 14 (10.7) | |
| Native American/Pacific Islander | 84 (4.9) | 11 (13.1) | | 3 (3.6) | | 9 (10.7) | |
| Other | 172 (10.1) | 33 (19.2) | | 9 (5.2) | | 32 (18.6) | |
| Parental education | | | .92 | | .6 | | .89 |
| Some high school | 79 (4.7) | 13 (16.5) | | 1 (1.3) | | 12 (15.2) | |
| High school graduate | 300 (17.7) | 53 (17.7) | | 15 (5.0) | | 45 (15) | |
| Some college/technical school | 438 (25.8) | 74 (16.9) | | 20 (4.6) | | 67 (15.3) | |
| College graduate | 457 (26.9) | 67 (14.7) | | 20 (4.4) | | 60 (13.1) | |
| Completed graduate school | 236 (13.9) | 38 (16.1) | | 13 (5.5) | | 30 (12.7) | |
| Unknown | 189 (11.1) | 31 (16.4) | | 12 (6.3) | | 29 (15.3) | |
| US-born | | | .009 | | .03 | | .04 |
| Yes | 1551 (91.3) | 261 (16.8) | | 80 (5.2) | | 228 (14.7) | |
| No | 123 (7.2) | 10 (8.1) | | 1 (0.8) | | 10 (8.1) | |

Note. Abuse self-reported in past 3 months. P values determined by χ^2 test. The sample size was n = 1699.

^aPercentages may not equal 100% because of small amounts of missing data.

^bRow percentage.

Predictors of Abuse Perpetration

Table 2 presents bivariate associations of predictors and abuse outcomes. The odds of

perpetrating physical–sexual abuse were significantly lower for adolescent boys who held more gender-equitable attitudes than for those

TABLE 2—Crude Associations Between Gender-Equitable Attitudes, Intention to Intervene, Bystander Behavior, and Recent Abuse Perpetration by Male High School Athletes Toward Heterosexual Dating Partners: Coaching Boys Into Men Trial, California, 2009–2010

| Variable | Mean (SD) | Any Abuse, OR (95% CI) | Physical-Sexual Abuse, OR (95% CI) | Emotional Abuse, OR (95% CI) |
|----------------------------|-------------|---------------------------|---------------------------------------|---------------------------------|
| Gender-equitable attitudes | 3.02 (0.58) | 0.29 (0.22, 0.37) | 0.19 (0.13, 0.29) | 0.30 (0.24, 0.39) |
| Intention to intervene | 3.62 (0.77) | 0.53 (0.45, 0.63) | 0.51 (0.39, 0.67) | 0.54 (0.45, 0.64) |
| Witnessed abuse | 2.83 (2.45) | 1.23 (1.17, 1.29) | 1.26 (1.16, 1.38) | 1.22 (1.16, 1.30) |
| Bystander intervention | | | | |
| Positive | 0.61 (1.25) | 1.09 (1.00, 1.18) | 1.22 (1.08, 1.37) | 1.06 (0.97, 1.16) |
| Negative | 2.21 (2.20) | 1.28 (1.21, 1.35) | 1.25 (1.14, 1.37) | 1.28 (1.21, 1.36) |

Note. CI = confidence interval; OR = odds ratio. Abuse self-reported in past 3 months.

whose attitudes were less gender equitable (odds ratio [OR] = 0.29; 95% confidence interval [CI] = 0.22, 0.37) and for respondents with greater intention to intervene than for those with less intention to intervene (OR = 0.53; 95% CI = 0.45, 0.63). Athletes who reported witnessing abuse in their schools were approximately 25% more likely than those who did not witness such abuse to report perpetrating abuse themselves (OR = 1.23; 95% CI = 1.17, 1.29). Negative intervention behavior was also associated with a more than 25% increase in odds of engaging in abuse (OR = 1.28; 95% CI = 1.21, 1.35). Positive intervention behavior was associated with physical–sexual abuse only (adjusted OR [AOR] = 1.22; 95% CI = 1.08, 1.37).

In models adjusted for covariates and within-school clustering (Table 3), gender-equitable attitudes remained negatively and significantly associated with incidents of abuse, indicating that participants with higher gender-equitable attitude scores were less likely than others to report perpetrating any abuse (AOR = 0.36; 95% CI = 0.28, 0.46), physical–sexual abuse (AOR = 0.22; 95% CI = 0.12, 0.40), or emotional abuse (AOR = 0.38; 95% CI = 0.29, 0.51). Similarly, greater intention to intervene corresponded to lower odds of engaging in any abuse (AOR = 0.60; 95% CI = 0.48, 0.75), physical–sexual abuse (AOR = 0.63; 95% CI = 0.46, 0.85), or emotional abuse (AOR = 0.61; 95% CI = 0.48, 0.78). Witnessing abuse remained significantly associated with engaging in abuse when we controlled for gender-equitable attitudes, intention to intervene, and covariates. For every 1 additional abusive behavior witnessed in school, students were 18% more likely to report engaging in abuse themselves (AOR = 1.18; 95% CI = 1.09, 1.27).

Effects of Witnessing Peer Abuse Perpetration

Table 4 presents models that we restricted to the subsample of student athletes who reported witnessing peers perpetrate abuse in the 3 months prior to the survey (n = 1284) to assess associations of gender attitudes, positive and negative intervention behavior, and abuse. Gender-equitable attitudes remained negatively and significantly associated with abuse: more gender-equitable attitudes were

TABLE 3—Adjusted Logistic Regression Models of Gender-Equitable Attitudes, Intention to Intervene, Witnessing Abuse, and Outcomes of Abuse by Male High School Athletes Toward Heterosexual Dating Partners: Coaching Boys Into Men Trial, California, 2009–2010

| Variable | Any Abuse, AOR (95% CI) | Physical-Sexual Abuse, AOR (95% CI) | Emotional Abuse, AOR (95% CI) |
|----------------------------------|-------------------------|-------------------------------------|-------------------------------|
| Gender-equitable attitudes | 0.36 (0.28, 0.46) | 0.22 (0.12, 0.40) | 0.38 (0.29, 0.51) |
| Intention to intervene | 0.60 (0.48, 0.75) | 0.63 (0.46, 0.85) | 0.61 (0.48, 0.78) |
| Witnessed abuse in school | 1.18 (1.09, 1.27) | 1.22 (1.10, 1.37) | 1.18 (1.08, 1.28) |
| Grade | | | |
| 9 | 0.41 (0.25, 0.66) | 0.76 (0.43, 1.35) | 0.34 (0.20, 0.59) |
| 10 | 0.59 (0.38, 0.92) | 1.23 (0.67, 2.25) | 0.54 (0.32, 0.90) |
| 11 | 0.59 (0.43, 0.80) | 0.69 (0.45, 1.06) | 0.60 (0.45, 0.79) |
| 12 (Ref) | 1.00 | 1.00 | 1.00 |
| Race/ethnicity | | | |
| Non-Hispanic Black | 1.76 (1.03, 3.01) | 1.60 (0.71, 3.61) | 1.81 (1.10, 2.99) |
| Hispanic | 1.36 (0.72, 2.55) | 2.08 (0.95, 4.54) | 1.21 (0.62, 2.37) |
| Asian | 1.16 (0.51, 2.62) | 0.64 (0.17, 2.46) | 1.22 (0.57, 2.61) |
| Native American/Pacific Islander | 0.97 (0.44, 2.12) | 0.94 (0.20, 4.37) | 0.91 (0.43, 1.93) |
| Other | 1.45 (0.82, 2.58) | 1.23 (0.59, 2.60) | 1.67 (0.95, 2.94) |
| White (Ref) | 1.00 | 1.00 | 1.00 |

Note. AOR = adjusted odds ratio; CI = confidence interval. All models controlled for parental education, immigrant status, sport, and all other variables shown.

associated with a lower likelihood of engaging in abuse. Negative intervention behavior was associated with 13% to 24% higher odds of recently perpetrating abuse (any abuse, AOR = 1.22; 95% CI = 1.10, 1.35). Positive intervention was associated with 17% higher odds of perpetrating physical abuse and was not associated with other abuse variables (physical–sexual abuse, AOR = 1.17; 95% CI = 1.02, 1.35).

Because of the racial/ethnic differences we observed in abuse involvement, we conducted formal tests for interaction of race with both gender attitudes and intention to intervene. The interaction of race and gender attitudes was not significant. Although we found a significant interaction with race and intention to intervene with respect to any abuse and emotional abuse (but not physical abuse), the best-fit model according to the Akaike information criterion was the model that did not include this interaction term.

DISCUSSION

In our sample of adolescent male student athletes, recent abuse was common, with 16% of boys reporting engaging in any abuse, 5%

reporting physical–sexual abuse, and 14% reporting emotional abuse against their female dating partners in the past 3 months. Consistent with previous research on masculinity and violence,²⁴ we found that gender-equitable attitudes were negatively associated with abuse. That is, adolescent boys with more gender-equitable attitudes were less likely than their peers with inequitable or misogynistic attitudes to report recently abusing their dates. This is an important finding because of the shift of dating violence prevention programs toward a more gender-neutral position²⁵ and supports the inclusion of gender attitudes in the core content of violence prevention programs.

Our findings also inform our understanding of the potential efficacy of bystander intervention approaches that encourage men and boys to intervene when they witness abuse. We found that the likelihood of recent abuse decreased as students demonstrated greater intention to intervene, which supports theories that posit that intention is a strong predictor of behavior.²⁶ In our final adjusted models, both gender attitudes and intention to intervene were highly significant predictors, suggesting their robust and independent influence

on abuse perpetration. These findings highlight the importance of targeting both gender attitudes and intention to intervene, because they appear to be operating on related but distinct pathways. The few bystander intervention programs that have addressed gender attitudes have struggled to significantly shift gender attitudes.²⁷ More work is needed to understand how attitudes, which are influenced by factors within and outside of the school environment, may be molded in school and community interventions.

We also examined bystander behaviors—positive and negative intervention—in separate models among students who had witnessed recent abuse perpetrated by peers (Table 4). Each incident in which boys engaged in negative bystander behavior was associated with an approximately 20% increase in the likelihood that they would report recently engaging in abuse themselves. These findings suggest that bystander programs should focus specifically on reducing negative intervention behaviors in addition to promoting positive behavior.

It is important to place these findings within the context of adolescent development. We found that older student athletes were more likely than their younger counterparts to engage in abuse. Until recently, few methodologically rigorous studies have been conducted to understand the trajectory of relationship abuse during adolescence. One important longitudinal study suggests that a curvilinear trajectory operates over time for physical and sexual relationship abuse, such that violence increases, peaks around age 16 or 17 years, and decreases as adolescents transition into young adulthood. In that study, psychological or emotional abuse increased uniformly over time.²⁸ These findings, which are supported by our study, may be related to the development of more frequent, longer, and more emotionally involved relationships over time as well as the initiation and increase of sexual activity during adolescence.²⁹ However, although younger adolescents have less experience with formal dating relationships, early gender-based conflicts occur,³⁰ so consideration of the role of gender in relationships may be important in violence prevention initiatives for middle school youths.

Adolescents also experience transitions in their social relationships with peers as they age,

TABLE 4—Adjusted Logistic Regression Models of Gender-Equitable Attitudes, Intention to Intervene, and Outcomes of Abuse by Male High School Athletes Toward Heterosexual Dating Partners Among Respondents Who Witnessed Recent Abuse in School: Coaching Boys Into Men Trial, California, 2009–2010

| Variable | Any Abuse, AOR (95% CI) | Physical-Sexual Abuse, AOR (95% CI) | Emotional Abuse, AOR (95% CI) |
|----------------------------------|-------------------------|-------------------------------------|-------------------------------|
| Gender-equitable attitudes | 0.33 (0.24, 0.46) | 0.21 (0.11, 0.39) | 0.35 (0.25, 0.50) |
| Positive intervention | 1.07 (0.99, 1.16) | 1.17 (1.02, 1.35) | 1.07 (0.98, 1.16) |
| Negative intervention | 1.22 (1.10, 1.35) | 1.13 (1.01, 1.26) | 1.24 (1.11, 1.39) |
| Grade | | | |
| 9 | 0.42 (0.22, 0.81) | 0.63 (0.32, 1.27) | 0.37 (0.19, 0.73) |
| 10 | 0.63 (0.39, 1.02) | 1.17 (0.69, 1.98) | 0.57 (0.33, 0.98) |
| 11 | 0.61 (0.41, 0.90) | 0.63 (0.36, 1.09) | 0.63 (0.44, 0.89) |
| 12 (Ref) | 1.00 | 1.00 | 1.00 |
| Race/ethnicity | | | |
| Non-Hispanic Black | 1.78 (0.97, 3.27) | 1.77 (0.79, 3.95) | 1.84 (1.02, 3.30) |
| Hispanic | 1.65 (0.74, 3.67) | 2.27 (0.95, 5.43) | 1.50 (0.69, 3.28) |
| Asian | 1.26 (0.53, 2.95) | 0.36 (0.06, 2.27) | 1.50 (0.65, 3.44) |
| Native American/Pacific Islander | 0.78 (0.29, 2.11) | 1.12 (0.24, 5.20) | 0.65 (0.23, 1.81) |
| Other | 1.52 (0.78, 2.99) | 1.25 (0.57, 2.75) | 1.77 (0.94, 3.32) |
| White (Ref) | 1.00 | 1.00 | 1.00 |

Note. AOR = adjusted odds ratio; CI = confidence interval. All models controlled for parental education, immigrant status, sport, and all other variables shown.

which is likely related to the dynamic pubertal transition as a period of intense social emotional learning and changes in thought regulation and reasoning.³¹ For many adolescent boys, relationships formed with other adolescent boys shape their sense of self, and the pressure to conform to social norms of masculinity may be felt in powerful ways.³² This is particularly relevant to the adolescent male athletes in our sample. To be attentive to the realities of adolescent social development, bystander intervention programs should consider the dynamic role of gender norms in the development and interaction of homosocial and romantic relationships and how this relates to adolescent relationship abuse. Our data suggest some interactions between intention to intervene and race/ethnicity that also need further exploration, including intersections of gender norms and relationship development by race/ethnicity and social class.

Limitations

The associations we observed cannot be interpreted as causal because of the cross-sectional nature of the study. Further, although

our observational data suggested important associations of adolescent relationship abuse with attitudes, more rigorous program evaluation data would be required to determine whether those attitudes can be altered and whether alteration would lead to reductions in abuse. We also recognize that the Gender-Equitable Norms Scale we used cannot capture all related attitudes and behaviors, such as conformity to gender norms, which may influence abuse and bystander intervention behavior. Further work is needed to elucidate the formation of masculinity scripts during adolescence and their development over time to improve measurement for future studies and guide intervention development.

Another concern was social desirability bias, which could have resulted in underreporting of abuse and overstatement of students' gender attitudes and actual intention to intervene. Survey administrators urged athletes to be as honest as they could and emphasized that the survey was anonymous. Selection bias was a potential concern because nonparticipating athletes were more likely to be members of the football, basketball, and baseball teams.

Athletes on 2 of those 3 teams held less equitable gender attitudes and were more likely than other respondents to perpetrate abuse against their dating partners, so potential bias may have resulted in an underestimation of the association between gender attitudes and violence.

Generalizability to other populations (e.g., adolescents who do not participate in team sports) is also unclear. However, 80% of school-aged children participate in formal athletic programs,^{33,34} which suggests the likely relevance of findings from our sample of male high school athletes to broader populations of adolescent boys. Our analyses were further restricted to students who had been in dating relationships—85% of the original sample. Therefore, we do not have information on what bystander behavior may look like among, and the gender attitudes held by, students who have never dated. Finally, because the outcome was recent relationship abuse (in the past 3 months), the prevalence reported here cannot be compared with other studies measuring lifetime or past-year abuse. Strengths of our study included the large sample and low percentages of missing data.

Conclusions

Our findings confirm the need for continued violence prevention efforts for adolescent boys: 16% of our sample of student athletes reported recently abusing their female dating partners. Moreover, our findings support targeting prevention efforts toward adolescent male athletes, who are often regarded as leaders within their school environments. Our study provides evidence to support efforts to bolster both gender-equitable attitudes and bystander interventions to reduce male dating violence. Further work is needed to understand the various ways gender attitudes are formed and how school-based intervention may work with efforts in other spheres to effect community-level change. ■

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Contributors

H. L. McCauley led the literature review, study design, data analysis, data interpretation, and writing. D. J. Tancredi and S. B. Austin assisted with the study design, data analysis, data interpretation, and writing. J. G. Silverman, M. R. Decker, and M. C. McCormick assisted with study design, data interpretation, and writing. M. C. Virata oversaw project data collection and assisted with data analysis and writing. E. Miller led the overall study design and implementation, data collection, data analysis, data interpretation, and writing.

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Study procedures were approved by human subjects committees at the University of California, Davis; Harvard School of Public Health, and University of Pittsburgh.

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