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Derek A. Kreager

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# Unnecessary Roughness? School Sports, Peer Networks, and Male Adolescent Violence

Derek A. Kreager  
*Pennsylvania State University*

*This article examines the extent to which participation in high school interscholastic sports contributes to male violence. Deriving competing hypotheses from social control, social learning, and masculinity theories, I use data from the National Longitudinal Study of Adolescent Health to test if (1) type of sport and (2) peer athletic participation, contribute to the risks of male serious fighting. Contrary to social control expectations, analyses suggest that athletic involvement fails to inhibit male violence. Moreover, there is a strong relationship between contact sports and violence. Football players and wrestlers, as opposed to baseball, basketball, tennis, and other athletes, are significantly more likely than nonathletic males to be involved in a serious fight. Additionally, the direct effect of football is explained by the football participation of individuals' peers. Males whose friends play football are more likely to fight than other males, supporting perspectives that emphasize peer contexts as important mediators. Overall, findings are consistent with the expectations of social learning and masculinity arguments. The theoretical and policy implications of these results are discussed.*

In many U.S. secondary schools, interscholastic sports play crucial roles in structuring student status hierarchies and peer friendship networks. "Star" male athletes are often venerated by their peers and local com-

munities, becoming core members of a school's "in-crowd" (Bissinger 1991; Coleman 1961; Holland and Andre 1994). Similarly, nonathletic friends of popular athletes tend to share elevated social status and gain membership in more exclusive peer groups (Eckert 1989). The predominance and visibility of sports in schools encourages all students, regardless of their gender or athleticism, to orient their behaviors toward these activities and define their own identities in relation to the most popular athletes and athletic cliques.

The salience of athletics in adolescent culture fuels ongoing debates about the social role of youth sports. On the one hand, proponents have long argued that interscholastic athletics positively impact adolescent development. Here, youth sports are viewed as (1) increasing adolescents' bonds to schools, conventional peers, and conventional adults (Crosnoe 2001; Larson 1994; McNeal 1995); (2) socializing adolescents into the basic values of American life, such as competition, fair play, self-restraint, and achievement (Jeziorski 1994); and (3) helping students develop social and physical com-

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Direct all correspondence to Derek A. Kreager, Department of Sociology and Crime, Law, and Justice, Pennsylvania State University, 211 Oswald Tower, University Park, Pennsylvania 16802-6207 (dkreager@psu.edu). I thank Kate Stovel, Jerry Herting, and Ross Matsueda for their helpful comments on drafts of this manuscript. This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01 HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 ([www.cpc.unc.edu/addhealth/contract.html](http://www.cpc.unc.edu/addhealth/contract.html)).

petence, leading to increased self-esteem, social capital, and upward mobility (Ewing et al. 2002; Otto and Alwin 1977; Spady 1970). Studies, in fact, concur on many of these points in consistently finding positive relationships between sports participation and a host of individual benefits, including increased self-esteem, locus of control, academic achievement, commitment to graduation, educational aspirations, and economic attainment (Eccles and Barber 1999; Fejgin 1994; Mahoney and Cairns 1997; Marsh 1993; McNeal 1995; Otto and Alwin 1977). In addition, some research finds a negative relationship between sports participation and delinquent behavior (Landers and Landers 1978; Langbein and Bess 2002; Mahoney 2000; Stark, Kent, and Finke 1987). The latter lends legitimacy to delinquency prevention programs, such as midnight basketball, that promote sports as a means of keeping urban males off of dangerous inner-city streets (Hartmann 2001).

Critical scholars, however, assail traditional views of youth sports as incomplete and problematic. Buoyed by first-hand accounts from athletes and coaches, these scholars reveal the contradictions and inequities underlying much of modern sport (see Gatz, Messner, and Ball-Rokeach 2002, for a review). Rather than building socially competent young men and women, it is suggested, the conditions of contemporary athletics embed youth in value systems marred by homophobia, sexism, racism, and ruthless competition. Within these contexts, middle-class white males have the most to gain, while disadvantaged minority and female athletes are either marginalized or forego long-term attainment in favor of short-term status benefits and illusory professional careers.

Critical feminist scholars have taken particular interest in the relationship between sports and gendered violence. Rejecting the view that sports help to curb antisocial behavior, some researchers assert that the hypermasculine cultures characteristic of many contact sports teach violence as an acceptable means of maintaining valued male identities (Burstyn 1999; Coakley 2001; Connell 1995; Crosset 1999; Messner 1992; Sabo 1994; Young, White, and McTeer 1994). By rewarding physical aggression with on-the-field success and increased prestige, contact sports are portrayed as both elevating athletes above their peers and increasing off-the-

field violence toward perceived outsiders and “weaker” students. Masculinized sports then become socially sanctioned stepping-stones toward privilege and power—sites where coaches, peers, parents, and the media encourage masculine identities founded on physical aggression and domination.

Seemingly endless reports of high-profile athlete misbehavior bolster such critical views. Accounts of brawling, sexual assault, and bullying by prominent athletes regularly stream across our televisions and newspapers, prompting the question: “Are these activities promoting the fair play and sportsmanship outlined in their charters, or are they encouraging violence by already privileged elites?” Answering this question has important implications for school-based sporting programs, yet surprisingly little research has addressed the youth sports-violence relationship. Moreover, studies that have been conducted generally suffer from methodological limitations that strongly curtail substantive conclusions.<sup>1</sup>

In this article, I move beyond prior research with theoretically grounded hypotheses and advanced quantitative methods. I rely on three distinct theoretical traditions—social control, social learning, and masculinity theories—to derive competing hypotheses for the sports-violence relationship. I then test these for five very different sports—football, basketball, baseball, wrestling, and tennis—using data from the National Longitudinal Study of Adolescent Health (Add Health). The unique design of the Add Health survey not only allows for the longitudinal examination of violent outcomes, but it also includes a wealth of individual background variables and sociometric data. The measures of friendship networks are of particular interest, as they allow one to move beyond prior research and gain leverage on a potential mechanism connecting sports to violence (i.e.,

<sup>1</sup> Two problems endemic to sport-violence research are (1) a reliance on cross-sectional designs that are unable to distinguish selection from socialization effects and (2) a failure to distinguish effects across different types of sports (see Baumert, Henderson, and Thompson 1998; Begg et al. 1996; Jackson et al. 2002; Nixon 1997; Wright and Fitzpatrick 2006).

embeddedness in sports networks increases the likelihood of individual violence).

## THEORETICAL BACKGROUND

### *SOCIAL CONTROL PERSPECTIVES*

Sports scholars commonly invoke social control concepts, particularly Hirschi's (1969) social bonding theory, to examine the linkages between sports participation and adolescent antisocial behavior (Crosnoe 2001; Larson 1994; McNeal 1995). Rather than focusing on delinquent motivations, control theories posit that it is the constraining influence of conventional bonds that explain variations in individual-level delinquency. Schools (and positive relationships with peers and adults within schools) are seen as important sites for adolescent integration into conventional society. Accordingly, youth who are tightly bonded to school and to their student peers are more likely to refrain from violent behavior than are other, less bonded, youth.

Because interscholastic sports are institutionally sanctioned activities governed by school-connected adults, social control perspectives predict that sports participation should increase adolescents' bonds to conventional society and reduce antisocial behavior (Crosnoe 2001; Larson 1994; McNeal 1995). Hirschi's (1969) elements of the social bond—attachment, involvement, commitment, and belief—are readily applied to individual sports participation. First, sports participation should increase attachments between athletes and their teammates and coaches (Coleman 1961; Messner 1992). These ties should reduce antisocial behaviors by constraining individual tendencies toward aggression and delinquency. Second, athletic participation should build athletes' commitment to conventional lines of action, because the penalty for deviance would include the loss of athletic status and a related decrease in social standing. Third, the time required to practice and succeed in sports should increase adolescents' involvement in conventional activities and decrease, by default, the time available for antisocial behavior (McNeal 1995).<sup>2</sup> Finally, because the rules

and values of sports are assumed to lie within the value system shared by conventional society, participation in sports should increase adolescents' belief in the moral order and, thus, prosocial behavior (Larson 1994). Indeed, many youth sports programs have explicit written missions to promote fair play, teamwork, and conventional values (Fine 1987).

Much of the empirical evidence supports the dimensions of social control theory outlined above. Adolescent athletes are less likely to drop out of high school (Mahoney and Cairns 1997; McNeal 1995), more likely to attend college (Eccles and Barber 1999; Marsh 1993; Sabo, Melnick, and Vanfossen 1993), and less likely to behave delinquently (Landers and Landers 1978; Langbein and Bess 2002; Mahoney 2000; Stark et al. 1987). None of this work, however, addresses violence specifically, nor does it address the possibility of variation in antisocial outcomes by forms of athletic engagement.

Control perspectives assume that the motivation to commit delinquent acts is constant across persons and that group norms supportive of crime are weak or nonexistent (Hirschi 1969). Because organization in favor of crime is thought inconsequential, control theorists dismiss the possibility that individuals may be tightly bonded to groups or subcultures that promote antisocial behaviors. Following this logic, violence by male athletes would be interpreted as evidence that either sports are not

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because these activities increase adolescents' time spent in structured situations supervised by conventional authority figures (Agnew and Petersen 1989; Osgood et al. 1996). According to these perspectives, the situational properties of sports participation should reduce opportunities for deviance *while youth are taking part in the activity*. This differs from the social control view, in that no assumptions are made about individuals' motivations or personal characteristics (e.g., social bonds [see Osgood et al. 1996]). Instead, the focus is on the activity itself, leaving open the possibility that unstructured and unsupervised time spent outside of sports may increase athletes' deviance. As Hirschi (1969:190) pointed out, delinquency may not require large amounts of time, so that time spent in structured activities—such as sports—may not prevent off-the-field delinquent behaviors in unsupervised settings.

<sup>2</sup> In a related literature, authors in the routine activities tradition assert that sports should curb deviance

conventional activities or that violent athletes are not fully bonded to sports. As there is much evidence suggesting that sports involvement is generally associated with conventional behavior, we are left to conclude that violent male athletes are mavericks within their programs, alienated from other players and the conventional institutions of school and family. It would be this lack of social integration that frees an athlete to behave violently.

### ***SOCIAL LEARNING PERSPECTIVES***

In contrast to social control theories, social learning perspectives allow for subgroup variation in attitudes toward violence and law violation. Accordingly, individuals learn antisocial values and techniques within intimate social relations, particularly among friends and family members (Akers 1998; Sutherland 1947). Because some individuals and social groups are thought to have positive attitudes toward criminal behavior (or at least justify such behavior under certain circumstances), social learning theorists assume that individuals may be tightly bonded to others while simultaneously holding attitudes favorable to law violation. It is this assumption that most separates learning theories from those of the social control tradition (Matsueda 1997).

At the heart of social learning approaches is the idea that delinquency, like any other behavior, is learned in social interaction. Sutherland (1947), in his classic work, postulates that delinquency results from individuals learning prodelinquency situational definitions (or attitudes) within intimate social contacts. Accordingly, delinquency occurs when a person holds more positive than negative delinquent definitions of a situation. Akers and colleagues (Akers 1998; Akers et al. 1979; Burgess and Akers 1966) have expanded on this by including concepts of operant conditioning from behavioral psychology. This more general model adds specific mechanisms, such as imitation and personal and vicarious reinforcement, to the learning process. Individual violence and delinquency are thus assumed to emanate from continual and reciprocal processes of social observation, attitude internalization, and real and perceived reinforcements from the behavior of self and others. Research has confirmed the explanatory power of the social learning

approach, particularly with regard to the relationship between peer behavior and individual delinquency (Matsueda and Anderson 1998; Warr 2002; Warr and Stafford 1991).

Hughes and Coakley (1991) apply social learning ideas to the seeming paradox of athlete deviance. Rather than suggesting that athletes' antisocial behaviors result from social alienation or the rejection of cultural values, they contend that such behaviors stem directly from the normative definitions learned in sports, a concept they call "positive deviance." They state that the values associated with sports—striving for distinction, sacrificing for The Team, playing through pain, and refusing to accept limits—are generally associated with individual success and conventional behavior. Yet, these norms may also create situations where athletes "do harmful things to themselves and perhaps others while motivated by a sense of duty and honor" (p. 311). They point to the widespread use of performance enhancing drugs as a clear example of such behavior. These drugs are considered deviant by broader society, but within sporting contexts, they are often modeled and reinforced as acceptable means to boost performance in a highly competitive environment. A similar argument may be applied to aggressive behavior, in that aggression is often an essential element for on-the-field success. By applying lessons learned in sports, athletes may perceive violence and intimidation as acceptable means of achieving off-the-field goals and solving problems unrelated to sports.

Peer relationships play central roles in the learning process, particularly during the status-conscious adolescent years (Coleman 1961). As noted previously, sports provide males with clear avenues toward increased peer status (Eder and Kinney 1995; Holland and Andre 1994). Team sports in particular may also direct individual behavior toward group norms. Ridicule, appeals to group loyalty, and status competition are primary mechanisms for ensuring individual conformity to group expectations (Warr 2002). For male athletes, derisive comments such as "pussy" and "chicken" pose deep threats to status within the peer group, prompting behaviors meant to regain face. Perceived threats to masculine reputations or social status may escalate into "character contests" where violence becomes an acceptable means of resolving the encounter (Goffman 1967; Luckenbill



1977). Situational research of such “honor contests” consistently finds that peers play important roles in the violent transaction (Polk 1999). Audiences both heighten the visibility of status threats and become resources for conflict resolution. As Curry (1998) notes in his study of athlete barroom violence, peers may simultaneously encourage violence against perceived outsiders and bear witness to a group member’s fighting prowess: “These fights with other males (never members of one’s own team) had a way of building team cohesion and expressing masculine courage” (p. 211). Moreover, such activities also serve to further insulate the athlete from nonathletic peers and increase disdain for those who have not made the sacrifices of sports (Hughes and Coakley 1991; Messner 2002). Violence by male athletes may thus bind teammates into exclusive peer groups where individuals are forced to jockey for status with displays of aggression, risk taking, and ridicule.

#### **MASCULINITY PERSPECTIVES AND CONTACT SPORTS**

Aggressiveness and feelings of superiority may be endemic to sport culture and increase violence among all athletes. However, qualitative research by masculinity scholars suggests that sports are not equal in their relationships to individual violence. The contention here is that “hypermasculine” contact sports (e.g., sports where physical domination, the use of the body as a weapon, and brutal bodily contact are necessary for on-the-field success) create conditions where violence becomes an acceptable means of “doing” masculinity and maintaining valued masculine identities (Coakley 2001; Connell 1995; Crosset 1999; Messner 1992; Young et al. 1994). By differentiating sporting contexts and emphasizing the gendered nature of sport-related violence, masculinity theorists extend social learning ideas and provide additional hypotheses for the relationship between sports and violence.

Stemming from critical feminist perspectives, masculinity theories focus on male groups to illuminate the processes underlying gendered hierarchies (Connell and Messerschmidt 2005). A central concept for these arguments is hegemonic masculinity, commonly defined as the cultural patterns of action that allow some men to maintain dominance over females and sub-

ordinated males. Displays of aggression, independence, competition, and a rejection of femininity are thought to be culturally honored ways of being a man, so that enacting these qualities allows men to “do” gender while also reproducing a system of gender inequality. For masculinity theorists, understanding the reproductive processes associated with hegemonic masculinity allows for the recognition of alternative gender forms and opens possibilities for less oppressive gender regimes.

Within the masculinity literature, heavy-contact sports are typically portrayed as important avenues for males to construct hegemonic masculine identities. Accordingly, these sports become “endlessly renewed symbol[s] of masculinity” that promote the “violence and homophobia frequently found in sporting milieu” (Connell and Messerschmidt 2005:833). In contact sports, on-the-field violence is intertwined with success, prestige, and essentialist images of “maleness.” Contact sport athletes are admired for their strength and determination and rewarded with increased prestige and access to exclusive peer groups, the latter serving to insulate athletes from alternative gender conceptions. The connection between on-the-field violence and identity should then increase contact athletes’ risks of violence beyond the playing field (Crosset 1999; Pappas, McKenry, and Catlett 2004). Such behavior confirms the contact athlete’s sense of self, connects him to his teammates, and protects his powerful position relative to subordinated masculinities and femininities.

In their qualitative study of a middle school, Eder, Evans, and Parker (1997) document how young boys are able to construct masculine identities within heavy-contact sports. On football fields and wrestling mats, the authors observe boys setting up “a pattern in which higher status is associated with intimidation of others and lower status is associated with submissive behavior” (p. 69). Responses to insults and physical confrontations establish the masculine pecking order and provide the contact athletes with access to high-status groups. Although coaches attempt to confine boys’ combative behavior to the playing field, violence extends to informal settings. Memories of “good hits” and “take-downs” establish the informal social order and identify the leaders as the best fighters. Simultaneously, the aggression modeled

on the playing field carries over to disdain for nonathletes, who are derided as being weak and effeminate (e.g., “pussies” and “fags”) and, thus, become subject to violent victimization (Eder et al. 1997:76–78).

### *PHYSICAL CONTACT AND AMERICAN SPORTS*

To understand the relationship between adolescent sports and violence in the United States, we must first understand this country’s current sports landscape. Unquestionably, the most prominent team sports in contemporary U.S. society are football, basketball, and baseball. Each corresponds to its own season and is well-represented nationally at both the collegiate and professional levels. Huge industries help promote and broadcast their games, advertise their merchandise, and capitalize on the celebrity status of successful players. More important for this study, these sports are also found in most secondary schools and are at different points on the “contact” continuum.

Football is considered a heavy-contact sport because physical bodily contact is an acceptable and necessary component for on-the-field success. It is impossible for a team to win a football game without physically dominating opposing players through tackles, blocks, hits, and other forms of “brutal body contact” (Coakley 2001:176). In contrast, the rules of basketball prohibit play that is physically violent, allowing contact only when it is incidental to the normal course of a game. Although physical and verbal (e.g., trash-talking) intimidation of opponents are key strategies (Eveslage and Delaney 1998), bodily contact to the point of violence or to “take down” an opponent is expressly forbidden and severely sanctioned (Shields 1999). If basketball is less contact-oriented than football, baseball lies at the opposite end of the contact continuum. At most points in a baseball game, opposing players occupy separate physical spaces and the goals of the game do not require physically defending those spaces. Only on rare occasions (e.g., preventing a double-play, sliding into home, or pitchers “brushing back” batters) are baseball players able to threaten opponents physically, and these instances are closely monitored by officials to ensure that actions are not meant to hurt or injure.

According to masculinity arguments, variations in physical contact across these sports arguably relate directly to the masculine definitions fostered by players. For football athletes, on-the-field violence is likely entwined with male status and identity (Coakley 2001; Messner 1992). Social learning approaches would also expect football players’ networks to reinforce violent behavior as a means of maintaining peer status and avoiding ridicule (Akers 1998; Warr 2002). Although basketball and baseball players, like virtually all athletes, would associate aggressiveness with definitions of self, these definitions should fall short of violence because physical violence is an unnecessary and unreinforced dimension for athletic success.

Combining learning and masculinity concepts creates an expectation that football will be a stronger predictor of fighting than noncontact team sports. But what of individual sports? Social learning theories would expect peers to have greater impact on individual behavior in an interdependent team sport than in the more autonomous environments of individual sports. If so, then comparing team and individual sports with similar levels of physical contact would provide insights into the group nature of male violence. Football and wrestling appear to be ideal candidates for such a comparison. Similar to football, wrestling is an exclusively male contact sport, but the small size of wrestling teams (typically fewer than 15 wrestlers) and the individual nature of competition may temper wrestling’s peer effects. In addition, a noncontact and gender neutral individual sport, such as tennis, provides a useful comparison at the opposite end of the contact continuum. Not only does tennis have a long history of gender inclusiveness, but it is also played on a surface where opponents are physically separated by a net. For social learning and masculinity perspectives, the lack of physical contact, low connection with masculinity, and individual nature of tennis should limit its connection to male violence.

### *SELF-SELECTION AND SPURIOUSNESS*

The above perspectives suggest a direct causal relationship between sports and violent behavior. It is likely, however, that factors prior to athletic participation are influential in explaining

subsequent outcomes. For example, athletes may be more likely to possess aggressive traits that increase the likelihood of sports participation, success, and individual violence. If this is the case, then the relationship between sports and violence would be spurious and explained by the stable trait of aggressiveness. Aside from population heterogeneity in aggressive propensities, a spurious sports-violence relationship may also result from early socialization experiences. Messner (1992) finds that childhood relationships with fathers, brothers, uncles, and peers contribute to individuals' definitions of masculinity and subsequent desires to participate in sports. These definitions, as well as the environments encountered in early athletic teams, may select individuals into secondary school athletic programs and explain subsequent violence. Parents and coaches may play similar selection roles. If parents encourage aggressive children to play sports, or if coaches select players based on their aggressiveness, again it is a pre-existing trait, and not sports per se, that causes later violent behavior. Addressing these issues of selection and spuriousness is a key component—and, indeed, contribution—of this article.

Below, I test several competing hypotheses about the relationship between sports participation and male adolescent violence. From social control theory, one would expect sports participation to inhibit violent behavior by bonding youth to conventional institutions. This contrasts sharply with the hypothesis derived from masculinity perspectives that the contexts of heavy-contact sports produce conditions supportive of male violence. Importantly, the masculinity hypothesis adds a sports-specific dimension and an explicit focus on male behavior. From social learning perspectives, I also examine the possibility that peer athletic participation is an important mediating link. Notably, my final modeling explores whether pre-existing conditions, such as prior levels of fighting, delinquency, or background characteristics, make spurious the sports-violence relationship. This offers both leverage on the question of potential selection effects and confidence in interpretations of any sports-violence association highlighted in the earlier analyses.

## DATA AND MEASURES

### SAMPLE

I draw from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a school-based, nationally representative study of American adolescents in grades 7 to 12. From a list of all high schools in the United States, Add Health selected a stratified sample of 80 schools with probabilities proportional to size. Schools were stratified by region, urbanicity, school type, ethnic mix, and size. Additionally, for those high schools not covering grades 7 to 12, the sample included the middle school that contributed the most students to the high school's incoming cohorts. The result is a sample of 145 schools of varying sizes, affiliations, and community contexts.

From 1994 to 2001, the study collected four waves of data from students, parents, and school administrators. For this analysis, I use data from the first (in-school) and second (Wave I in-home) questionnaires. The in-school survey was administered to all available students in each of the sampled schools. In total, 90,118 students (approximately 80 percent of those listed on school rosters) were surveyed. In each school, surveys were administered in a single day during one 45- to 60-minute class period. The questionnaire included basic demographic characteristics, school-related activities (including sports participation), and risk behaviors (including a measure of violence). Also, students nominated their five best male and five best female friends. This allows for the construction of friendship data taken directly from friends, thereby avoiding possible measurement error associated with self-reported friends' behavior. Sixteen schools had less than 50 percent of the students complete the nomination portion of the survey and were dropped from the analysis. The resulting sample consists of 75,871 students nested in 129 schools.

The Wave I in-home survey took place in the year following the in-school survey and consisted of a random sample of approximately 200 students from each of the originally sampled schools ( $N = 20,745$ ). The 90-minute interviews were administered in individuals' homes and, to ensure confidentiality, questions were completed using laptop computers. Nested within 120 schools, 14,396 students completed both the in-school and in-home questionnaires. As my



hypotheses are primarily concerned with discerning the prevalence of *male* violence, I restricted my analyses to the 6,397 males who completed both surveys and attended schools with adequate network measures. As with any large survey, missing data due to item nonresponse creates problems of representativeness that may bias estimated coefficients. Although none of the variables in my analyses have greater than 10 percent missing values, I use imputation techniques in STATA to maintain statistical power and regain a nationally representative sample of male adolescents.

### DEPENDENT VARIABLE

The dependent variable for this analysis is self-reported violence taken from the first in-home interview. This measure captures students' self-reports of getting into a serious physical fight

within 12 months of the in-home interview. Descriptive statistics for this outcome are listed in Table 1. The variable is coded 0 if a respondent reported not fighting in the last 12 months and 1 if he reported fighting one or more times. Approximately 40 percent of male respondents reported getting into a serious physical fight.

The serious fighting item was originally measured on an interval scale, with values ranging from 0 (never) to 4 (seven or more times). As the distribution for this variable is highly skewed, I chose to present findings using a binary measure capturing the prevalence of serious fighting. In preliminary analyses, however, I also explored alternative modeling specifications of the ordinal scale (e.g., using ordered logit and linear regressions) and found similar results to those presented here.

**Table 1.** Variable Descriptives (Survey Adjusted) (N = 6,397)

Variable	Mean (Percent)	(SE)	Minimum	Maximum
Dependent Measure (Wave I In-Home Survey)				
Serious Fighting	.40	(.01)	0	1
Independent Variables (In-School Survey)				
Age	14.83	(.13)	10	19
Black	.15	(.02)	0	1
Intact Family	.73	(.01)	0	1
Parent Attachment	4.71	(.01)	1	5
School Commitment	3.18	(.02)	1	4
Self-Esteem	4.14	(.02)	1	5
Family SES	6.12	(.10)	0	10
Club Member	.41	(.01)	0	1
Body Mass Index	22.59	(.13)	11.22	54.28
Athlete	.63	(.01)	0	1
Football	.26	(.01)	0	1
Basketball	.27	(.01)	0	1
Baseball	.22	(.01)	0	1
Wrestling	.07	(.00)	0	1
Tennis	.04	(.00)	0	1
Other Sport	.36	(.01)	0	1
Prior Physical Fighting	.57	(.01)	0	1
Minor Delinquency	7.03	(.17)	0	36
No Reciprocated Male Friends	.44	(.02)	0	1
Friends Outside School	1.02	(.08)	0	10
Percent Male Friends Football	.16	(.01)	0	1
Percent Male Friends Basketball	.17	(.01)	0	1
Percent Male Friends Baseball	.15	(.01)	0	1
Percent Male Friends Wrestling	.02	(.00)	0	1
Percent Male Friends Tennis	.03	(.00)	0	1
Percent Male Friends Other Sport	.20	(.01)	0	1
Male Friends Average Delinquency	3.84	(.19)	0	36
Percent Male Friends Physical Fight	.31	(.01)	0	1

### INDIVIDUAL-LEVEL INDEPENDENT MEASURES

The primary independent variables are individuals' sports participation, friends' sports participation, and prior levels of violence and risk behaviors. Descriptive statistics for these measures, as well as for the background control variables, are listed in Table 1. Add Health asked respondents about their participation in 12 athletic activities (baseball/softball, basketball, field hockey, football, ice hockey, soccer, swimming, tennis, track, volleyball, wrestling, and other sports). Figure 1 displays the male par-

ticipation rates for these activities, as well as the percentage of male nonathletes. As expected, males are most likely to play baseball, football, and basketball. Approximately 25 percent of the sampled males participated in each of these activities. The individual sports of interest, wrestling and tennis, have lower participation rates (8 percent and 4 percent, respectively), but they remain adequately represented and have relatively low correlations with the team sports (highest  $r$ : wrestling-football = .21).

Along with being the most common male athletic activities, the "big three" sports are also positively related to peer status. Figure 2 shows

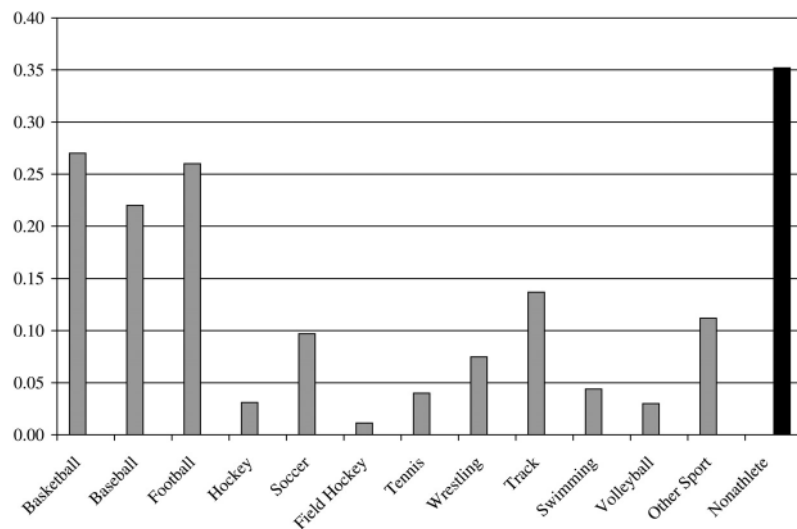


Figure 1. Male Adolescent Sports Participation

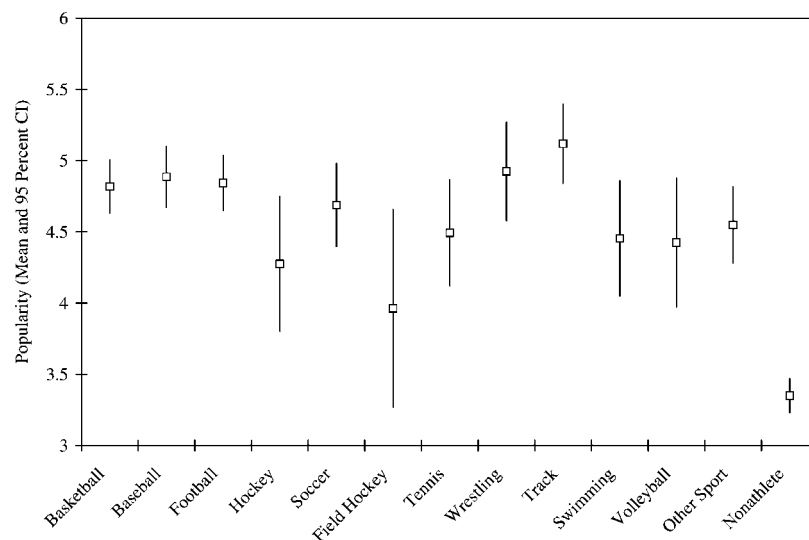


Figure 2. Popularity by Male Adolescent Sports Participation

the mean number of friendship nominations received by athletes participating in the various sports, as well as the mean number of nominations going to nonathletes. The greater popularity of athletes as compared to nonathletes is most apparent. On average, athletes have over one friendship nomination more than nonathletes ( $\text{mean}_{\text{Athlete}} = 4.6$ ,  $\text{mean}_{\text{Nonathlete}} = 3.3$ ,  $p < .001$ ). Among the different sports, baseball, basketball, and football rate high in their association to peer status. Moreover, the “big three” sports are very similar in their popularity levels, which when added to their similar participation rates, help to reduce the risk that differences on these qualities could make spurious any associations found between the sports and male violence. Of the individual sports, wrestling has a relatively high association to peer status, while tennis is among the lower status sports.

I use two sets of sports measures. First, I create a global sports measure, coded 1 if the respondent answered yes to participating in any of the listed athletic activities and 0 otherwise. This measure allows me to test if athletes, versus nonathletes, are more likely to be involved in serious fights. Second, I look at the independent effects of football, basketball, baseball, wrestling, and tennis on future violence. These sports are interesting because they vary along a variety of theoretical dimensions, including physical contact, popularity, and peer contexts. I then compare these sports to other sports and the omitted category of nonathletes.<sup>3</sup>

I operationalize friends’ sports participation using six variables, each capturing the proportion of the respondents’ male friends who play football, basketball, baseball, wrestling, tennis, or another sport. To more closely approximate objective friendships, I rely on reciprocated nominations, meaning that a tie sent by the respondent (ego) had to be returned by the receiver (alter) for it to be considered a “friendship.”<sup>4</sup> Values for these measures range from 0,

meaning that a respondent either (1) lacks reciprocated male friendships or (2) has male friends that do not play the sport in question, to 1, indicating that all of the respondent’s male friends play the designated sport. To distinguish between individuals with no reciprocated male friendships and adolescents whose male friends do not play sports, I include a dummy variable for respondents who lack reciprocated male friendship nominations. In addition, I control for the number of reported friendships not listed in the high school or sister middle school rosters. Approximately 15 percent of all friendship nominations were to unknown peers.

To account for potential selection effects, I include two measures of prior antisocial behavior. The first, prior violence, is taken from the in-school survey and indicates whether a respondent was involved in a fight within 12 months prior to the survey. Unlike the in-home measure, the in-school violence measure does not refer to the “seriousness” of the fight. It is therefore not a true lagged dependent measure. However, its reference to fighting should continue to capture much of the effects of unobserved population heterogeneity. The distribution for this variable is similar to the Wave I measure, but a moderate correlation (.35) between the in-school and Wave I measures suggests that there remains sufficient variation to explain. The second measure, prior delinquency, is a mean index of six minor delinquency items (smoking, drinking, getting drunk, skipping school, doing something dangerous on a dare, and racing a vehicle) with possible responses ranging from 0 (never) to 6 (nearly everyday). The Cronbach alpha for the prior delinquency index is .71. To control for friends’ levels of fighting and minor delinquency, I also construct measures that average these behaviors across respondents’ male friends. The peer measure of violence captures the proportion of male friends who have been in a fight, while the peer delinquency measure captures the average delinquency among a respondent’s male friends.

same perceptions. I examined alternative network measures (send-or-receive, just send, and just receive) with similar results.

<sup>3</sup> Correlations between the sports measures range between .04 (tennis-football) to .24 (baseball-football), suggesting that each measure has ample unique variance to minimize problems of collinearity.

<sup>4</sup> This measure is often termed the send-and-receive network and overcomes potentially problematic situations where individuals perceive that they have friends while the supposed “friends” do not share the

Self-esteem and socioeconomic status may also be related both to violence and sports participation (Hughes and Coakley 1991). I construct two indices. The self-esteem measure is an index created from three items (“I have a lot of good qualities,” “I have a lot to be proud of,” and “I like myself just the way I am”) with a Cronbach alpha of .76. The SES measure captures the highest parents’ educational and occupational attainment, as reported by students in the in-school survey. Values in this scale range from 0 (neither parent achieved a high school education or is currently employed) to 10 (at least one parent pursued postgraduate education and has a professional job).

I include individual background and demographic variables to control for concepts that prior research has found to be related to delinquency or sports participation. These variables include measures for age, black race, family structure, attachment to parents (“How much do you think your mother/father cares for you?” 1 = not at all to 5 = very much), and commitment to school (“How hard do you try and do your school work well?” 1 = I never try at all to 4 = I try very hard to do my best). Of the latter, parent attachment and school commitment are commonly viewed as indicators of social bonding and are therefore important controls for examining the independent effects of sports on violence. Membership in nonathletic extracurricular clubs may also indicate school bonding and confound the relationship between sports and violence. I create a dichotomous measure of club membership with values of 1 for respondents who participated in one of 20 nonathletic activities and 0 otherwise. Finally, I include a measure of respondents’ body mass index (BMI), calculated as:  $BMI = (\text{kilos})/(\text{meters}^2)$ . Physical size may be positively related to both male violence (Felson 1996) and sports participation.<sup>5</sup>

<sup>5</sup> Add Health’s BMI measure does not distinguish physical size from strength or muscularity. Males with relatively high BMI values may therefore be either more muscular or more obese as compared to other males.

## MALE VIOLENCE AND SPORTS

I use survey-corrected logistic regressions to predict the binary measure of serious fighting. I estimate models in STATA using the SURVEY commands (Chantala and Tabor 1999). This method adjusts standard errors to correct for the correlated error structure resulting from individuals sharing similar school contexts. In addition, the inclusion of poststratification weights gains population estimates by correcting for (1) unequal selection probabilities resulting from the oversampling of specific subpopulations, such as disabled students and siblings, and (2) the loss of respondents due to survey attrition.<sup>6</sup>

Table 2 reports five survey-adjusted models of male serious fighting. The first model includes individual background and control variables, as well as a dichotomous measure of athletic participation. The second model disaggregates the athletic variable into the six sports categories with nonathletes as the reference category. The third model addresses issues of selection by including measures of prior individual fighting and minor delinquency. The fourth model adds measures of peer athletic behavior and network structure. Finally, the fifth model examines the effects of peer-reported violence and minor delinquency.

Looking at Model 1, we find few surprises regarding the relationships between individual background characteristics and violence. Consistent with prior research, age, intact family, socioeconomic status, parent attachment, and school commitment are significant negative risk factors for subsequent male violence, while black males are at greater risk of fighting. Interestingly, involvement in a nonathletic extracurricular activity also decreases the likelihood of getting into a fight by over 25 percent. This finding, along with the negative effects of parental attachment and school commitment,

<sup>6</sup> In a previous draft of this article, I used HLM to correct for the correlated error structure and explore school-level effects. However, I found little between-school variance in serious fighting and few school-level effects. Moreover, the individual-level effects in the HLM models were virtually identical to those presented in this article. For the sake of parsimony, I therefore present only the survey-adjusted estimates.

**Table 2.** Survey-Adjusted Logistic Regressions of Male Adolescent Violence (N = 6,397)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio
Intercept	4.37*** (.51)		4.29*** (.52)		1.73** (.61)		1.82** (.63)		1.59* (.65)	
Age	-.17*** (.03)	.84	-.16*** (.03)	.85	-.14*** (.03)	.87	-.14*** (.03)	.87	-.13*** (.03)	.87
Black	.37** (.11)	1.44	.34** (.11)	1.41	.42** (.12)	1.52	.42** (.12)	.84	.42** (.12)	.85
Intact Family	-.27** (.09)	.77	-.27** (.09)	.77	-.18 (.09)	.84	-.17 (.10)	.97	-.17 (.10)	.97
Parent Attachment	-.12 (.06)	.89	-.11 (.06)	.90	.00 (.06)	1.00	.01 (.06)	.96	.01 (.06)	.96
School Commitment	-.23*** (.05)	.80	-.21*** (.05)	.81	-.04 (.07)	.97	-.03 (.07)	.99	-.03 (.07)	.99
Self-Esteem	-.12* (.05)	.89	-.14** (.05)	.87	-.11 (.06)	.89	-.11 (.06)	1.02	-.12 (.06)	1.01
Family SES	-.04** (.02)	.96	-.04* (.02)	.96	-.04* (.02)	.96	-.04* (.02)	1.25	-.04* (.02)	1.23
Club Member	-.31*** (.08)	.74	-.28** (.08)	.76	-.24** (.08)	.79	-.24** (.08)	.90	-.24** (.09)	.90
Body Mass Index	.002 (.01)	1.00	-.007 (.01)	.99	-.013 (.01)	.99	-.014 (.01)	1.04	-.014 (.01)	1.04
Athlete	.10 (.08)	1.10								
Football			.34*** (.09)	1.41	.23* (.10)	1.26	.18 (.11)	1.19	.18 (.11)	.81
Basketball			-.01 (.09)	.99	-.02 (.10)	.98	.02 (.10)	1.02	.01 (.10)	.94
Baseball			-.01 (.10)	.99	-.05 (.10)	.96	-.02 (.10)	.98	-.02 (.10)	.89
Wrestling			.37* (.14)	1.45	.24 (.16)	1.27	.22 (.15)	1.25	.21 (.15)	1.37
Tennis			-.43* (.20)	.65	-.48* (.20)	.62	-.45* (.20)	.64	-.45* (.20)	.64
Other Sport			-.13 (.09)	.88	-.14 (.09)	.87	-.11 (.09)	.90	-.10 (.09)	.90

(continued on next page)

provides support for social control arguments that conventional bonds inhibit youth violence. Model 1 also suggests, though, that athletic participation may not hold similar inhibitory effects. Contrary to the hypothesis derived from social control theory, I find that athletic participation shows a *positive* relationship to serious fighting. Albeit nonsignificant, this runs counter to arguments suggesting that sports participation encourages conventional lines of action and reduces antisocial behavior. It remains unclear, however, if the relationship between violence and athletic participation varies by *type* of sport (as suggested by masculinity arguments). I now turn to this question.

Model 2 examines the independent effects of football, basketball, baseball, wrestling, and tennis participation on male adolescent violence. I also include an indicator of participation in other sports, leaving nonathletes as the omitted category. The results demonstrate that sports differ significantly in their relationships to serious fighting. Of the “big three” U.S. sports, only football shows a significant and positive relationship with fighting. Playing football increases the risk of getting into a serious fight by over 40 percent, compared to nonathletes, while basketball and baseball participation show no relationship to fighting. Of the two individual sports, wrestling shows a positive



Table 2. (continued)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio	Beta (SE)	Odds Ratio
Prior Physical Fighting					1.40*** (.08)	4.07	1.41*** (.08)	4.09	1.40*** (.08)	4.07
Minor Delinquency					.04*** (.01)	1.04	.04*** (.01)	1.04	.04*** (.01)	1.04
Peer Network Measures										
No Reciprocated Male Friends							-.08 (.09)	.93	.04 (.12)	1.04
Friends Outside School							.04 (.02)	1.04	.04 (.02)	1.04
Percent Male Friends Football							.35* (.16)	1.42	.33* (.16)	1.38
Percent Male Friends Basketball							-.20 (.15)	.82	-.22 (.15)	.81
Percent Male Friends Baseball							-.20 (.15)	.82	-.22 (.14)	.80
Percent Male Friends Wrestling							-.02 (.24)	.98	-.07 (.24)	.94
Percent Male Friends Tennis							-.55 (.34)	.58	-.52 (.34)	.59
Percent Male Friends Other Sport							-.14 (.14)	.87	-.12 (.14)	.89
Male Friends Average Delinquency									-.01 (.01)	.99
Percent Male Friends Physical Fight									.31* (.14)	1.37
F-Statistic (df1, df2)	12.88 (10,128)		10.97 (15,107)		37.64 (17,105)		25.64 (25,97)		27.05 (27,95)	

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

effect on fighting that is similar to football, with wrestlers being 45 percent more likely than nonathletes to get into a fight. Playing tennis shows the opposite effect, significantly decreasing the risks of fighting by 35 percent. These results provide strong support for masculinity arguments, in that the two heavy-contact and exclusively male sports (i.e., football and wrestling) show the strongest positive relationships to male violence, while tennis, the sport with the least amount of physical contact and historically the least male dominated, has the strongest negative association with male violence. On the other hand, there appears to be little support for the expectation that involvement in high visibility sports alone increases levels of violence. Neither baseball nor basketball is associated with an increased risk of fighting. Moreover, wrestling, an individual sport with low participation rates, has a strong positive asso-

ciation to male violence. Together, these results suggest a continuum of physical contact and masculinity whereby highly masculinized contact sports increase the risks of violence. Sports low in physical contact and less associated with masculinity, in contrast, seem to curb such behavior.

It is possible that the effects of football and wrestling are spurious and explained by latent characteristics or prior socialization. Model 3 gains leverage on this question by including measures of prior fighting and minor delinquency. These variables control for much of the effects of state dependence or selectivity into sports, while also providing a more conservative test of the sports-violence relationship. There is, notably, considerable stability in antisocial behavior over time. Self-reported fighting during the in-school survey increases the risk of being in a serious future fight by over 300 percent. Similarly, minor acts of delinquency increase the likeli-

hood of serious fighting, suggesting the generality of antisocial behavior (Gottfredson and Hirschi 1990). Indeed, these variables attenuate over one-third of the football coefficient and almost one-half the wrestling coefficient, making the latter nonsignificant. Football, however, remains a strong and significant predictor of violence, suggesting that self-selection does not account for the entire relationship.

Model 4 explores the potential mediating role, derived from social learning theories, of friendship network composition on the sports-violence relationship. This model includes peer network measures for each of the six sports categories. The results provide support for combined social learning and masculinity predictions. Males with a high proportion of reciprocated friends playing football are significantly more likely to behave violently than those without football friends. Net of the number of friends playing other sports, individuals whose friends all play football are 38 percent more likely to get into a serious fight than those without football friends. All other measures of peer sports participation are nonsignificant.

It is particularly interesting that embeddedness in wrestling networks shows a small negative relationship to violence (a finding that persists when all other peer measures are removed from the model). This suggests that it is the combination of heavy physical contact and a team setting (e.g., football), and not just the physical contact associated with wrestling, that encourages male violence. Indeed, football friendships fully attenuate the direct effect of individual football participation, decreasing the size of the football coefficient by 35 percent from Model 3. Much of the violence associated with football is thus explained by athletes in this sport having greater contact with other football players. Moreover, embeddedness in a football network significantly increases the risk of serious violence, regardless of an individual's level of football participation.

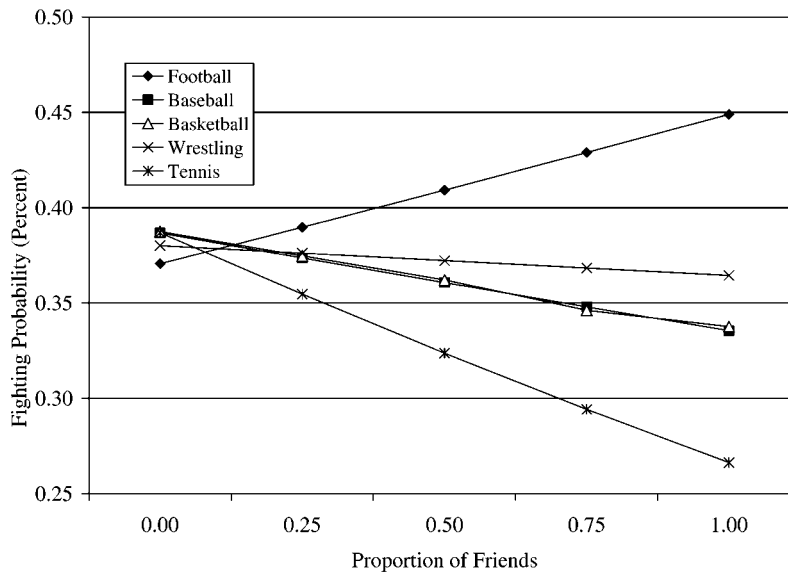
But is the effect of football-playing friends greater for football players than for non-football players? It could be that the relationship between football and violence increases as players are more immersed in football peer networks.<sup>7</sup> To test this possibility, I included an interaction between football and football networks in Model 4 (not

reported), yet this interaction was nonsignificant. This suggests that, if anything, football players in football networks are less likely to behave violently than similarly situated non-football males. Perhaps this null effect is not surprising, as a nonathlete in a football group would have more to prove and be in a more precarious social position than a football player in the same situation. Violence for the nonathlete would become a means of demonstrating worthiness to the football-dominated group.

To illustrate the effects of athletic friendships, Figure 3 presents predicted probabilities of serious fighting across different proportions of football, basketball, baseball, wrestling, and tennis friends (holding other variables at their means). The risk of fighting increases with higher proportions of football friends. Males with all-football friends are expected to have a 45 percent probability of getting into a serious fight, more than 8 percentage points higher than similar individuals with no football friends and almost 20 percentage points higher than males with all-tennis friends. Like Haynie's (2002) examination of the relationship between delinquency and delinquent friendship networks, this analysis suggests that embeddedness in homogeneous peer networks most effectively constrains individual behaviors toward group norms and increases opportunities for group-related behavior. In this case, the norms and opportunities associated with all-football networks are positively associated with increased male violence.

As with the potentially spurious relationship between individual sports participation and fighting, it is possible that the effects of peer networks may be explained by friends' violence or delinquent activities. Such a pattern would reflect the possibility that individuals seek friends who are violent and that shared violent tendencies predict both involvement in sports and future individual violence. Model 5 examines this by including measures of the proportion of friends who self-report being in a fight (in-school survey) and the average minor delinquency of those same friends. As one would expect, the proportion of friends who have been in a fight is positively associated with individual fighting. Individuals whose friends all report getting into a fight are themselves 38 percent more likely to get into a fight. The delinquency of male friends shows no relationship to seri-

<sup>7</sup> This idea was raised by a reviewer of a previous manuscript draft.



**Figure 3.** Predicted Probability of Serious Fighting by Friends' Sports Participation

ous fighting, net of other covariates. More importantly for my stated hypotheses, the introduction of the two measures does not significantly attenuate the peer football measure. Having a high proportion of friends playing football maintains a significant association with serious violence.

To test whether the effects of playing sports or having friends who play sports differ by race, social class, or self-esteem, I include interactions between the sport-specific variables and individual background variables in the final model (not shown). None of these interactions are significant at  $p < .05$ . Thus, there appears to be little evidence that normative pressures resulting from sports participation should be higher for more disadvantaged or insecure youth.

## DISCUSSION AND CONCLUSIONS

This analysis represents a quantitative foray into the relationship between adolescent sports and male interpersonal violence. While prior research has demonstrated that sports participation is associated with many positive outcomes, few studies have focused on the connections between high school interscholastic sports and violence, despite compelling reasons for doing so. The sports-violence relationship is a theoretically rich area with

competing hypotheses from prominent perspectives. Contrary to the social control hypothesis, my results suggest that sports fail to protect males from interpersonal violence. Indeed, contact sports (e.g., football and wrestling) are positively associated with male serious fighting. This effect is mediated by peer football participation, such that embeddedness in all-football networks substantially increases the risk for serious fighting. These findings are consistent with hypotheses derived from social learning and masculinity theories and provide important impetus for further research. Although caveats exist, this study offers leverage on a potential paradox of youth sports, and this understanding may help inform schools' sports policies.

Playing hypermasculine contact sports shapes subsequent violence. Some of this relationship is explained by selection effects, with the introduction of prior fighting and delinquency attenuating a significant proportion of the football and wrestling direct effects. This is not surprising, given that aggressive kids are likely to enter contact sports and the coaches of these activities are likely to choose aggressive kids to fill more competitive teams. However, selection does not appear to tell the entire story. Net of prior fighting and delinquency, football remains a significant predictor of serious fighting and

is only fully mediated with the introduction of friends' football participation.

The theoretical implications of a positive football-violence relationship are apparent. If we believe that football players generally lie at the center of a school's peer culture (as suggested by prior adolescence research and the sports-popularity relationship observed above), it is difficult to explain the football-violence connection as resulting from weak social bonds. The social and individual benefits accrued by male contact-sport athletes do not suggest that they reject conventional norms and lie on the fringes of conventional society, and yet increased rates of violence from these athletes also suggest that they are not altogether conforming. This seemingly paradoxical pattern was recognized at football's inception. Raymond Gettell, a physical educator at Amherst College at the beginning of the twentieth century, echoed the views of many Americans when he described football as an essential tool for preparing young men for war. According to Gettell, football simultaneously (1) provides young males with opportunities for "physical combat," (2) satisfies a "primitive lust for battle," and (3) provides a "higher and distinctively civilized interest in organization, cooperation, and the skilled interrelation of individual effort directed to a common purpose" (see Burstyn 1999:73). Gettell's statements reveal the competing demands facing many athletes.

On the one hand, parents, coaches, and communities expect athletes to abide by conventional rules, with the threat of team expulsion potentially deterring misbehavior. On the other hand, these same groups provide contact-sport athletes with situational definitions that support violence as a means of attaining "battlefield" victories, increasing peer status, and asserting "warrior" identities. Given these conflicting definitions, whether or not male contact-sport athletes behave violently likely depends on the situational contexts in which they find themselves. In the classroom, constraint and conformity validate the conventional identities expected of contact-sport athletes, as well as help to solidify their high status positions within schools. In informal peer situations, however, gendered displays of power and aggression allow the same males to meet group expect-

tations and maintain their superiority within gendered peer hierarchies.<sup>8</sup>

This argument parallels Sutherland's (1940) explanation for white-collar crime. For Sutherland, white-collar crime results from overconformity to the competitive norms within business and is therefore unlikely to stem from deviant identities or social isolation from conventional society. Like athletes in heavy-contact team sports, businesspeople are often reinforced for behaviors that are at odds with legal rules. Because their behaviors occur within respected and high-status institutional settings, however, both businesspeople and athletes are able to behave in socially unacceptable ways while avoiding deviant labels and identities. It is only when misbehavior within these institutions becomes particularly egregious or highly visible that the public reevaluates its perceptions and increases social controls.

While my findings contribute to our understanding of the relationship between sports and violence, there are obvious limitations. First, although I control for prior levels of fighting and minor delinquency, it remains possible that *unobserved* heterogeneity explains the association between peer athletic participation and violence. One possibility for addressing unobserved heterogeneity is to look at within-individual change over time using a fixed effects approach. In a fixed effects model, longitudinal dependent and independent variables measure change while controlling for time stable characteristics. Unfortunately, such an approach is impossible in the current analysis due to a lack of longitudinal sports measures. Add Health only asked sports-specific questions during the in-school survey. Without longitudinal data on sports participation, population heterogeneity and selection effects can only be addressed by identifying plausible instrumental variables

<sup>8</sup> Recent research also suggests that athletes are at greater risk of alcohol use (Eitle, Turner, and Eitle 2003) and drunk driving (Hartmann and Massoglia forthcoming). These findings, along with positive connections between minor delinquency and popularity (Allen et al. 2005; Kreager forthcoming), support views that "in-crowd" athletes are under pressure to maintain peer status with demonstrations of masculinity and risky behaviors (see also Curry 1998).

(notoriously difficult in social science research) or by including theoretically relevant controls. I take the latter approach but recognize the imperfection in this strategy.

Second, this study is unable to identify the causal mechanisms that explain the observed relationships. Although some of the results are consistent with arguments derived from masculinity and socialization theories, an inability to identify specific mechanisms (e.g., subjects' identification with hegemonic masculinity, objective reinforcement for violence, or victims as "weaker" peers) leaves open the possibility for alternative explanations. This is a problem often associated with cultural, identity, and values research. These concepts are elusive and open to interpretation. Qualitative research provides the best hope for understanding the mechanisms underlying this article's findings. Similar to the work of Eder and colleagues (1997) and Curry (1998), researchers must return to the field to identify the personal and situational characteristics associated with athlete misbehavior. Only ethnographic studies can gain leverage on the intersections of context, opportunity, and motivations that surround sports-related violence. Based on situational research of male-on-male violence (Luckenbill 1977; Polk 1999), I am inclined to believe that athlete violence typically involves threats to masculinity, the presence of an audience, and an informal setting such as a party or schoolyard. It may also be, though, that male athletes actively seek violent encounters to demonstrate their masculine prowess and group worth. Likewise, individual characteristics (e.g., athletic ability or position played) and team characteristics (e.g., win-loss record) may facilitate athlete violence. Addressing these issues is beyond the scope of this article, but future qualitative research could better disentangle the proximal causes of sports-related violence.

Despite such limitations, results suggest that sports, particularly male-dominated contact sports, have important consequences for male adolescent violence. Such findings may also have certain policy implications. As Connell (1996) states in his insightful look at gender and education, the most important step in addressing violence and bullying in schools is to become aware of the masculinizing practices that contribute to gender privilege and hegemonic domination. Sports, he argues, are major

contributors to a school's gender regime. The results of this project clearly demonstrate a link between contact sports and violence, meaning that these activities may be appropriate sites for disrupting male violence. Strong selection effects also suggest, though, that much of the connection between contact sports and violence occurs prior to individuals' high school athletic experiences. This possibility makes it all the more important that coaches, parents, and school administrators be conscious of their gate-keeping roles and use their positions to prevent continued athlete violence at all developmental stages. Precluding problematic youth from playing contact sports, not tolerating athletic violence, and fostering a more tolerant atmosphere are three means of breaking the contact sport-violence relationship. These changes necessitate de-emphasizing the "winning is everything" mentality, an unlikely proposition given the demands placed on coaches and players to make their schools and communities proud. However, the positive benefits for individual trajectories may outweigh the costs of a losing team record. As Trulson (1986) found when researching martial arts programs, contact sports that emphasize respect for others, self-control, patience, and humility can serve to reduce the violence of aggressive male adolescents. Programs developed according to these ideals may not necessarily win as many matches as those built on aggression and competitiveness, but their attractiveness lies in positively affecting the lives of problematic youth while fostering an environment of inclusiveness and respect.

*Derek A. Kreager is an Assistant Professor of Sociology and Crime, Law, and Justice at the Pennsylvania State University. His research interests include crime, the life course, deterrence, and social network analysis. He is currently working on a project with Ross Matsueda and David Huizinga that analyzes life course trajectories of drug use and crime. His prior work, focusing on decision making and delinquent friendships, has been published in ASR (with Ross Matsueda and David Huizinga) and Social Forces.*

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## **Unnecessary Roughness? School Sports, Peer Networks, and Male Adolescent Violence**

Derek A. Kreager  
*Pennsylvania State University*

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Several of the odds ratios for Models 4 and 5 in Table 2 are erroneous. A revised Table 2 with correct odds ratios is located on the *ASR* Web site: <http://www2.asanet.org/journals/asr/2007/toc059.html>.

The third sentence of the second full paragraph on p. 718 should read as follows: “Indeed, football friendships attenuate the direct effect of football to non-significance, decreasing the size of the football coefficient by 22 percent from Model 3.”