

Athletic Involvement and Adolescent Delinquency

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Abstract Although conventional wisdom suggests that organized sport deters delinquency by building character, structuring adolescents' time, and providing incentives for socially approved behavior, the empirical evidence to date has been mixed. Based on a sample of approximately 600 Western New York adolescents, the present study examined how self-reported jock identity, school athlete status, and frequency of athletic activity differentially influenced a range of delinquent behaviors. Neither athlete status nor frequency of athletic activity predicted these behaviors; however, jock identity was associated with significantly more incidents of delinquency. This finding was robust across both gender and race. Follow-up analyses indicated that jock identity facilitated both minor and major delinquency, with major delinquency effects for white but not black adolescents.

Keywords Athletic involvement · Delinquency · Adolescence · Identity

Lying, cheating, stealing, and other forms of deviant or delinquent behavior among high school-aged U.S. adolescents have grown more common over the course of the past decade (Josephson Institute of Ethics, 2002). While most teens experiment with delinquent behavior at some point in the developmental trajectory from childhood to adulthood, choices made in adolescence may have both immediate and long-term consequences. Thus considerable attention has been devoted to identifying structured activities that provide both opportunities for more conventional success and resources for exploiting those opportunities (Feldman and Matjasko, 2005; Fraser-Thomas *et al.*, 2005). For example, the salutary effects of organized sports on adolescent development

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have been widely documented (Ewing *et al.*, 1996; Women's Sports Foundation, 2000). This institution has a great deal of promise as a venue for promoting positive development because sports have historically occupied an unusually prominent space in the American adolescent social landscape. In the 2004–2005 school year, 42% of U.S. public high school students (about 7 million students, including 4.1 million boys and 2.9 million girls) participated in organized high school sports (National Federation of State High School Associations 2005; U.S. Census Bureau 2004).

Athletic involvement—in terms of both objective participation in organized sports and a subjective affiliation with an athletic or “jock” identity—plays a critical role in the lives of many American teenagers. Yet, although conventional wisdom has long suggested that organized sport deters delinquency by building character, structuring adolescents' time, and providing incentives for socially approved behavior, the empirical evidence has been mixed (Feldman and Matjasko, 2005; Rees *et al.*, 1990; Snyder, 1994). In fact, rather than reliably serving as a deterrent, sports may under some circumstances actually be itself a pathway to delinquency. A clearer understanding of the parameters of the multifaceted relationship between athletic involvement and delinquency is necessary in order to craft effective policies promoting positive youth development (Fraser-Thomas *et al.*, 2005). Thus the purpose of the present study was threefold: first, to establish whether athletic involvement deters or facilitates delinquency; second, to determine if these effects differ across dimensions of athletic involvement; and third, to establish whether these effects vary across gender and race.

Deterrence explanations

Several schools of thought have evolved over time to explain the complex relationship between adolescent sports participation and delinquency. Popular wisdom, and indeed public policy, tends to be guided by the assumption that athletic participation deters antisocial behavior, as indicated by the emergent popularity of midnight basketball programs in the 1990s as a crime reduction strategy (Colthart, 1996; Fraser-Thomas *et al.*, 2005; Hartmann, 2001). Much of the rationale for these programs is rooted in the premises of social bonds theory (Hirschi, 1969), which posits that strong bonds to society (attachment to nondelinquent significant others, commitment to conventional institutions, involvement in prosocial activities, and belief in a conventional value system) discourage delinquent behavior. Organized sports presumably strengthen social bonds by building “character” in general (Rees *et al.*, 1990; Sage, 1998), encouraging engagement in prosocial networks of peers and adults, and reducing unstructured, unsupervised leisure time conducive of opportunistic delinquency. School-sponsored sports programs also

give adolescent athletes incentive to conform by providing them with a valued and visible school activity that can be taken away if they violate team training rules or otherwise get in trouble (Purdy and Richard, 1983; Snyder, 1994).

Since Schafer conducted the first empirical study linking athletic participation with reduced rates of court-recorded delinquency in 1969, a number of researchers have affirmed the deterrent effect of youth sports. Segrave and Chu (1978) found that sports participation deterred serious criminal offenses more effectively than other conventional activities, particularly among lower class boys. Moreover, among athletes, Segrave and Hastad (1984) found that delinquency was strongly predicted by lack of attachment to school, suggesting that sport may be an anchor holding delinquent teens in school. However, the Segrave studies were unable to rule out the possibility of a selection effect; that is, a spurious relationship between athletic participation and deviance might occur if nondelinquent adolescents were disproportionately drawn to sports in the first place (Stuck, 1990). Stark *et al.* (1987) addressed this criticism by comparing male athletes and nonathletes over time, at ages 16, 18, and 24, on six indices of delinquency. Based on findings that black (but not white) athletes were more delinquent at age 16 than nonathletes, about as delinquent at age 18, and significantly less criminal at age 24, Stark and his colleagues concluded that sport had not only a deterrent impact but an actual “reform effect” on delinquent black male adolescents which could not be attributed to selection alone. Eitle *et al.* (2003) also found that the relationship between sports and substance use was race-specific; they identified a weak deterrent effect of sports participation on substance use by black adolescents, though this effect did not extend to white or Latino adolescents, and in fact white male athletes were more likely to be alcohol-abusive or alcohol-dependent than their nonathletic counterparts.

Where social bonds theory emphasizes the offender's motivations for refraining from deviant behavior, routine activities theory notes that opportunities to commit delinquent acts require not only a motivated offender but a suitable target and the absence of a capable guardian as well (Cohen and Felson, 1979). By structuring adolescents' time in adult-supervised settings during post-school hours when many teens are otherwise at loose ends, participation in organized sports limits such opportunities. Drawing on the premises of this theory, Osgood *et al.* (1996) found that in a national sample of young adults aged 18–26, deviant behaviors such as crime, substance use, and dangerous driving were associated with unstructured peer interactions (e.g., spending an evening out with friends) but not with more structured activities like movies, dating, shopping, or sports. Langbein and Bess (2002) also concluded that interscholastic sports programs may help to mitigate the negative effects of school size on the rate of in-school delinquent disturbances.

Although these findings seem promising with respect to establishing an empirical basis for sport-related interventions against delinquency (Forman *et al.*, 1995), the larger body of research in this area remains rife with inconsistencies. Several researchers have noted pervasive methodological flaws in much of the early deterrence literature (Begg *et al.*, 1996; Eitle *et al.*, 2003; Miracle and Rees, 1994; Purdy and Richard, 1983; Rees *et al.*, 1990; Snyder, 1994). Most studies that have found deterrent effects have employed cross-sectional designs that limit their ability to detect causal relationships or rule out selection bias; others have been distorted by the often unavoidable failure to account for other potentially confounding factors. Inconsistencies also result from the use of divergent sample populations, time frames, and operational definitions of both athletic participation and delinquency. In fact, a growing number of studies have challenged the deterrent hypothesis, finding either a positive association between sport and deviance (Begg *et al.*, 1996; Diekhoff *et al.*, 1996; Haines *et al.*, 1986; Josephson Institute of Ethics, 2002; Paetsch and Bertrand, 1997), weak or inconsistent effects (Eitle and Eitle, 2002; Eitle *et al.*, 2003; Leonard, 1998), or none at all (Best, 1985).

Facilitation explanations

Contrary to the idea that sport builds character and facilitates prosocial personality development, some researchers have found positive links between adolescent athletic participation and delinquent behavior, leading to the supposition that sport may actually facilitate deviance. In a longitudinal study of New Zealand adolescents, Begg and others (1996) found that sports activity was associated with the increased likelihood of a range of delinquent behaviors. Boys with high levels of sporting activity at age 15 were twice as likely to be delinquent by age 18 as those with low levels of sporting activity. The effect for girls was even more marked; those with medium levels of sporting activity were twice as likely, and those with high levels more than three times as likely, to be delinquent by age 18 as those with low levels of sporting activity. Paetsch and Bernard (1997) similarly concluded that Calgary middle and high school students with high levels of sports involvement were more likely to be highly delinquent (three or more delinquent acts in the past year) than those with low levels of sports involvement.

Several mechanisms may help to account for the positive link between athletic participation and deviant behavior. Public and peer adulation may lead athletes to perceive themselves as outside the normal rules (“above the law”) and thus free to engage in conventionally unacceptable behavior without penalty (Ungerleider, 1996). Snyder (1994) and Miracle and Rees (1994) documented cases of high school and college athletes for whom this sense of personal immunity translated into overtly criminal behavior. There is also

mixed evidence to suggest that contact sports that promote violence-tolerant athletic norms may spill over into nonathletic settings. Some studies have found such a spillover effect (Bloom and Smith, 1996; Paetsch and Bernard, 1997); others have not (Nixon, 1997).

General ethics may also be impacted by athletic participation. Bredemeier *et al.* (1985) found that both athletes and nonathletes tend to apply lower-level moral reasoning when thinking about sport-related dilemmas than when thinking about other dilemmas. This situation-specific or “bracketed” morality was exemplified by one young athlete who asserted, “When you’re on the field, then the game is football. Before and after, you deal with people morally” (1985, p. 25). In a more recent study of middle-school athletes, Shields *et al.* (2005) found that 27 percent reported acting like a “bad sport,” 9 percent admitted cheating, and 13 percent had deliberately attempted to hurt an opponent. Studying college athletes at the U.S. Military Academy, where athletic participation is mandatory, Priest *et al.* (1999) found that both female and male athletes’ ethical value choice scores declined over four years of college, and that intercollegiate and team-sport athletes generally scored lower than intramural and individual-sport athletes.

Perhaps the most intriguing of the facilitation explanations revolves around the supposition that intense athletic involvement may generate “positive deviance.” Positive deviance results not from alienation or rejection of conventional norms but, ironically, from an uncritical acceptance of—and overcommitment to—the goals and norms of sport. Hughes and Coakley (1991) argued that athletes whose identities and/or opportunities for mobility are most strongly or exclusively tied to their sport may engage in behaviors that are deviant in nature but conventional in motivation, such as the use of performance-enhancing or pain-masking drugs in order to conform to a sport ethic of success, excellence, and stoicism. Other deviant behavior, such as sexual aggression or excessive drinking, may have as a contributory factor the fraternal and exclusionary bond that often develops among elite male athletes.

Of particular note is the relationship between athletic participation and one specific form of deviant or unethical behavior: academic dishonesty. According to a 2002 study conducted by the Josephson Institute of Ethics, cheating has become normative among American high school students, with 74% reporting that they had cheated on an exam at least once in 2002 (up from 61% in 1992 and 71% in 2000). While athletic participation had no significant impact on the prevalence of shoplifting, stealing from parents, or lying, cheating was somewhat more common among varsity athletes (78%) than nonathletes (73%). These findings are consistent with other studies that have identified correlates of academic dishonesty among college undergraduates. Haines *et al.* (1986) found that participation in varsity and especially

intramural sports was associated with increased odds of cheating. In a follow-up study of students at the same university a decade later, the same research group found again that both intramural and varsity sports participation were positive predictors of academic dishonesty (Diekhoff *et al.*, 1996).

Dimensions of athletic involvement

While it is widely recognized that our understanding of the role played by youth sports in deterring or facilitating deviant behavior is to some degree obscured by inconsistent definitions of deviance and delinquency, the potential implications of differing operational definitions of athletic involvement have generally been overlooked. Most research studies on sport and deviance have employed objective measures of athletic participation, such as dichotomous indicators of varsity or intramural athlete status (Best, 1985; Bredemeier *et al.*, 1985; Diekhoff *et al.*, 1996; Haines *et al.*, 1986; Josephson Institute of Ethics, 2002; Segrave and Hastad, 1984; Snyder, 1994; Stark *et al.*, 1987), categorical measures of frequency of sports or exercise activity or number of sports played (Begg *et al.*, 1996; Osgood *et al.*, 1996; Paetsch and Bertrand, 1997), or some combination thereof (Buhrmann and Bratton, 1978; Priest *et al.*, 1999; Rees *et al.*, 1990; Segrave and Chu, 1978).

Far less common are more subjective measures of athletic involvement, such as self-reported athletic or “jock” identity. While a handful of researchers have explored possible links between subjective sports involvement and problem drinking, violence, or academic performance (Ashmore *et al.*, 2002; Barber *et al.*, 2001; Brown *et al.*, 1993; Eccles and Barber, 1999; Eccles *et al.*, 2003; Miller *et al.*, 2003; Miller *et al.*, 2006), only one study to date has even tangentially related adolescents’ self-identification as a jock or athlete to delinquency. Clasen and Brown (1985) found that compared to “druggie-toughs,” adolescents classified as “jock-populars” perceived stronger pressure not to engage in misconduct, a global measure of substance use, sexual activity, and minor delinquency.

A small number of studies have attempted to disaggregate the effects of objective athletic participation (what one does) from the effects of subjective jock identity (whom one is perceived to be, by oneself or others). Lantz and Schroeder (1999) critiqued the common tendency to measure athletic involvement using a single, dichotomous “athlete/nonathlete” indicator, noting that this overly simplistic system of classification fails to account for the strength or exclusivity of an adolescent’s identification with the athlete or jock role. Eccles *et al.* (2003) found a strong association between jock identity and team sports participation for male teens and a weaker one for females. The great majority of self-identified jocks of either gender participated in school sports. However, when required to choose a gender-blind ver-

sion of one of five identities exemplified in a recent popular movie (i.e., jock, brain, princess, basket case, or criminal), most male athletes (69%) identified themselves as jocks but a far smaller proportion of female athletes (22%) chose jock as their primary identity. Miller *et al.* (2005) also found that jock identity was disproportionately a male characteristic; among adolescents who reported two or more hours of athletic activity per week, 55% of boys and 33% of girls identified themselves as jocks, and among those who reported fewer than two hours of athletic activity, jocks comprised 36% of boys and 15% of girls. The correlation between athletic activity and jock identity was only .31, and was significant for white but not black male adolescents.

Efforts to untangle the relationships among athlete status, frequency of athletic activity, and identification with the jock or athlete role are relevant to the present analysis, since they may provide insights into the often inconsistent relationship between athletic involvement and deviance. These distinct dimensions of athletic involvement overlap, as evidenced by Eccles’ findings of parallel patterns of academic performance and drinking for athletes and jocks (Barber *et al.*, 2001; Eccles and Barber, 1999), but they are not proxies for one another; in fact, they appear to have different consequences for some adolescent attitudes and behaviors. Lantz and Schroeder (1999) concluded that subjective athletic identification more strongly predicted masculine and feminine role endorsements than objective athlete status, although both athletes and “high athletic identifiers” reported stronger endorsements of the masculine gender role than their nonathlete and low-identifying counterparts. Miller and her colleagues found that jock identity was associated with significantly higher levels of problem drinking (Miller *et al.*, 2003), nonfamily violence (Miller *et al.*, 2006), and sexual risk (Miller *et al.*, 2005), whereas athletic participation was unrelated to the first two outcomes and negatively associated with the third.

Gender and race differences

Relatively little attention has been devoted to studying how gender or race affects the relationship between athletic involvement and adolescent deviant behavior. Interestingly, while most studies have employed samples that were exclusively male (Best, 1985; Schafer, 1969; Segrave and Chu, 1978; Stark *et al.*, 1987) or exclusively female (Buhrmann and Bratton, 1978), their conclusions have been remarkably similar. Although males are clearly overrepresented among both athletes and delinquents, those studies that have incorporated both female and male subjects have generally found no discernible gendered patterns in the relationship between sports participation and deviant behavior (Begg *et al.*, 1986; Bredemeier *et al.*, 1985). For example, Priest *et al.* (1999) found that although women’s ethical value choice scores

tended to be higher than men's, both female and male athletes' scores declined at comparable rates across their four-year college careers. Moreover, Osgood *et al.* (1996) reported that gender differences in deviant behavior were largely reducible to gender differences in routine activity patterns, with young adult men spending more time overall in unstructured socializing with peers. In sum, existing research shows few if any gender distinctions in the sport/delinquency nexus.

Possible race differences in the relationship between athletic participation and adolescent delinquency remain for the most part untheorized and (except for Eitle *et al.*, 2003, noted above) empirically untested. However, two studies have argued that the relationship (deterrent or facilitative) should be stronger for adolescents of color than for white adolescents. Stark and his colleagues (1987) found a reform effect, from a delinquent late adolescence to a law-abiding early adulthood, for black but not white male athletes. They speculated that sport was especially salient as a source of both pride and upward mobility in black communities. Young athletes with an elevated position in those communities would presumably commit more strongly to a sport ideology, experience both improved self-esteem and higher aspirations, and accordingly engage in less delinquent or criminal activity. The researchers found a similar reform effect for white male athletes living in sport-oriented small towns, confirming their interpretation of the findings for black athletes. They concluded that the reform effect could not be attributed to selection bias, since athletes were initially more delinquent than nonathletes but grew less so over time; however, they were unable to account for athletes' disproportionate tendency toward initial deviance.

The nature of the relationship among sports participation, race, and delinquency remains in contention. That some linkage exists has been an article of faith in public policy, as evidenced by the targeting of young black men for midnight basketball leagues and related, sport-oriented crime intervention programs (Hartmann, 2001). In contrast to Stark and his colleagues, however, Hughes and Coakley (1991) saw very different implications in the valorization of black athletic participation. They theorized that those athletes for whom sport loomed largest as a potential source of personal identity and structural mobility—specifically, male, low-income, and minority athletes—would be most vulnerable to the pressures leading to positive deviance.

Hypotheses

Within the larger context of exploring the relationship between sport and adolescent delinquent behavior, the present study addresses three specific research questions.

First, does athletic involvement deter or facilitate delinquent behavior in adolescents? It seems clear that neither athletic involvement nor delinquency is a sufficiently mono-

lithic construct to permit a straightforward answer to this question. Conflicting results from previous research highlight the need to distinguish among varieties of deviance or delinquency. For example, the effects of athletic involvement may differ for major delinquency (that which causes measurable harm to others and/or is subject to serious legal penalties) and for minor delinquency (that which involves acting out, ethical violations, or age-inappropriate behavior). Adolescents who participate in organized sports have good reason to avoid major delinquent behavior which might result in removal from the team. It is less likely that athletic involvement would reduce minor delinquency, both because athlete status may help to immunize the adolescent against negative consequences and because some degree of acting out or risk-taking may be characteristic of a jock identity. Thus we hypothesized that athletic involvement would be associated with higher levels of minor delinquency but reduced levels of major delinquency.

Second, do different dimensions of athletic involvement (specifically, school athlete status, frequency of athletic activity, and jock identity) operate differently in relation to adolescent delinquency? The extant literature suggests that there should be distinct patterns for subjective versus objective measures of athletic involvement. We hypothesized that jock identity would be less protective against delinquency than athlete status or frequency of athletic activity; specifically, jock identity would be positively associated with delinquency, whereas we hypothesized no such relationship for athletic status or frequency of athletic activity.

Third, are relationships between different dimensions of athletic involvement and adolescent delinquency different across gender and racial groups? Although male adolescents are generally overrepresented vis-a-vis both athletic involvement and delinquent behavior, previous studies have for the most part not found clear gender distinctions in the relationship between the two. Therefore, we hypothesized that no significant gender differences would emerge. In contrast, those few studies that have addressed race as a key mediator of the sport/delinquency link have posited or found stronger effects for blacks than for whites. Hughes and Coakley (1991) made a persuasive argument for black male adolescent vulnerability to pressures toward positive deviance; on the other hand, Stark and his colleagues (1987) found compelling empirical evidence for black male susceptibility to a reform effect with respect to more conventional forms of delinquency. The present exploratory analysis included a number of delinquent or ethical violations (lying, cheating, vandalism, truancy, conflict with parents) that are not well-represented by either of these formulations. We therefore hypothesized that the effects of athletic involvement on delinquency would be stronger for black adolescents than their white counterparts, without predicting the direction of those effects.

Methods

Data

This analysis derives from the first and third waves of the longitudinal Family and Adolescent Study (Barnes and Farrell, 1992). In 1989, trained interviewers collected the first wave of data through face-to-face interviews with a randomly selected sample of 699 Western New York adolescents (aged 13 to 16) and their families. Questions about sensitive issues such as substance use and other forms of delinquency were privately reported via an accompanying self-administered questionnaire. The initial response rate was 71 percent, with black families deliberately oversampled ($N = 211$) in order to facilitate the testing of race-specific hypotheses. Additional data were collected, using the same procedures, in five subsequent waves ending in 1996; stringent follow-up procedures yielded retention rates of over 90 percent for each of these waves (see Barnes *et al.*, 1997, 2000 for details on sampling procedures and sample characteristics). In the present analysis, independent variables were derived from wave one of the data (1989); outcome variables were measured in wave three, approximately two years later (unweighted sample $n = 612$). Nine respondents who had dropped out of school more than a year prior to the survey were excluded from the sample because they could not provide meaningful responses on all of the outcome measures.

Dependent measures: Delinquency scales (wave three)

The Delinquency Scale summed responses to 17 questions about how often in the past year the respondent had engaged in a series of delinquent acts (see below). Categorical responses to each of the five component questions in the scale were recoded to midpoint values, including 0 (never), 1 (once), 2.5 (2–3 times), 4.5 (4–5 times), 7.5 (6–9 times), and 15 (10+ times). Summing responses to the questions yielded a potential response range from 0 occasions of delinquency to 255 occasions of delinquency in the past year. Alpha reliability of the scale was .77.

These 17 delinquent acts were further classified into two subscales. The 9-item Minor Delinquency Subscale (alpha = .70) asked questions about academic cheating (“copied answers from someone else’s exam or test paper in school”), cursing (“used dirty language or swear words”), parental conflict (“argued or fought with your mother” and “argued or fought with your father”), lying for personal gain (“tried to get something by lying to a person about what you would do for him or who you were”), binge drinking (“drank 5 or more cans of beer, drinks of wine or drinks of liquor”), violating curfew (“stayed out later than your parents said you should”), sexual activity (“had sexual relations with someone”), and truancy (“skipped a day of school without a real

excuse”). The 8-item Major Delinquency Subscale (alpha = .77) measured more serious behaviors, including physical assault (“beat up someone on purpose” and “got involved in a physical fight with a gang or group of friends”), drug use (“used drugs other than marijuana to get high or for kicks”), vandalism (“purposely damaged or messed up something not belonging to you”), theft (“took something of value which didn’t belong to you” and “took money from someone in your family without the person knowing about it”), unauthorized financial transactions (“used a credit card or check without the owner’s permission”), and breaking and entering (“broke into a house, business or car to take something or look around”). Several of these items (i.e., break-ins and unauthorized financial transactions) were relatively rare, resulting in a substantial skew. In order to conform to the assumptions of ordinary regression, the Major Delinquency Subscale was subjected to log transformation, reducing both skewness and kurtosis to acceptable levels.

Independent measures: Athletic involvement (wave one)

Athletic involvement was measured in three ways. First, respondents were asked, “Teenagers sometimes characterize one another on the basis of their attitudes toward school, clothes, music, partying, and so forth. Some people give names to these types, such as jocks, preps, air heads, burnouts and so forth. How well does each type fit you?” Those for whom the “jock” label fit “somewhat” or “very well” were coded as having a *jock identity*, or “jocks” (= 1); those who responded “a little,” “not at all,” or “never heard of this group” were coded as not having a jock identity, or “non-jocks” (= 0).

Second, *school athlete status* was assessed by asking respondents whether they participated in any school sports, such as football, basketball, baseball, swimming, or track (athlete = 1; nonathlete = 0). Third, respondents estimated *sports frequency*, or approximately how many times a year they engaged in sports and/or exercise activity; categorical-midpoint responses included 0 (none), 3 (a few times/year), 12 (about once a month), 30 (2–3 times a month), 78 (1–2 times a week), and 156 (3 or more times a week). For descriptive purposes only, this question was also recoded in order to permit a dichotomous assessment of whether the adolescent engaged in *frequent sports* (no = 0, yes = 1), where “frequent” was defined as at least once a week.

Independent measures: Sociodemographics (wave one)

Both athletic involvement and deviant behavior are nonrandomly distributed among adolescent populations. Thus we included in the analysis four sociodemographic variables that had the potential to confound the sport/deviance relationship:

gender, race, age, and socioeconomic status. Race was coded into two categories: black and white/other, with black respondents comprising 30 percent of the sample. Asian American, Latino, Native American, and “other” respondents ($n = 13$) were categorized with whites in order to maintain the complete sample for analysis. Family socioeconomic status was estimated by calculating the mean of three measures reported by the respondents’ parent(s): family income, mother’s highest attained level of formal education, and (where available) father’s highest attained level of formal education.

Independent measures: Contextual predictors (wave one)

Numerous factors may influence adolescents’ choices regarding delinquent behavior. To better isolate the effects of athletic involvement, we have included four additional strong predictors of delinquency: school grades, family functioning, prior delinquency, and prior delinquency by the respondent’s closest friend. Self-reported past-year grades were measured with a 7-point response range from 1 (“mostly Ds and Fs/64 and below”) to 7 (“mostly As/an average of 90–100”). To measure family cohesion or bonding, we used Olson, Portner, and Lavee’s 10-item 1985 FACES III scale, with a 6-point Likert response range from “almost never” to “almost always.” Respondents described their families with respect to statements such as “We like to do things with just our immediate family,” “Family members consult other family members on their decisions,” and “Family members ask each other for help.”

Of the 17 delinquent acts included in the wave-three Delinquency Scale, 10 were also measured at wave one, including 4 major behaviors (beating someone up, drug use, theft, and vandalism) and 6 minor behaviors (fighting with father/mother, violating curfew, lying, sexual activity, and truancy). These measures were combined to create a measure of prior delinquency by the respondent. To assess peer influence on delinquency, a comparable measure was also constructed for the adolescent’s closest friend, based on the respondent’s report.

Analysis

For bivariate analyses, respondents were compared by gender, race, jock identity, athlete status, and frequent sports participation. Mean differences on demographics, individual measures of delinquency, and overall delinquency were tested for statistical significance. Two multiple regression analyses were subsequently conducted. The first assessed main effects of sociodemographic, contextual, and athletic involvement variables on overall delinquency; the second tested for gender and race interactions with each type of athletic involvement. In a subsequent, supplemental analy-

sis, separate regression analyses were run to predict minor delinquency and major delinquency.

Results

Descriptive analyses

Table 1 describes the characteristics of the sample as a whole and provides comparisons by gender and by race. Whole-sample and gender-specific means were weighted to correct for the oversampling of black adolescents. Most respondents reported at least some athletic involvement at wave one. Approximately a third of the adolescents in the study identified themselves as jocks, and approximately two thirds reported participation in school sports, with a mean frequency of 92 days of athletic activity per year (about one day in four).

Nearly all respondents (99%) reported some form of wave-three delinquency. Minor delinquency was nearly universal. Most adolescents swore (92%), fought with their mothers (89%) or fathers (70%), broke curfew (78%), had sexual relations (63%), copied answers (59%), and/or skipped school (53%), and a sizeable minority binge drank (46%) and/or lied for personal gain (40%) at least once. In contrast, major delinquency was somewhat less common. Fewer adolescents reported at least one instance of vandalism (32%), stealing from a family member (27%), theft in general (24%), fighting with a gang or group of friends (21%), beating someone up (19%), non-marijuana drug use (12%), breaking and entering (8%), or unauthorized financial transactions (3%) (summary data not shown).

As expected, athletic involvement was not randomly distributed among these adolescents (see Table 1). In general, all three forms of athletic involvement (jock identity, school athlete status, and frequency of sports/exercise activity) were significantly higher among male respondents; e.g., boys were more than twice as likely as girls to identify themselves as jocks. Jock identity was also significantly more common among whites than blacks, and whites reported more frequent athletic activity; however, blacks and whites were equally likely to participate in school sports. Except for fighting with parents, boys reporting markedly higher levels than girls in all categories of wave-3 delinquency. The gender difference was statistically significant for 5 of the 9 minor behaviors and 6 of the 8 major behaviors. Race differences were less extreme, with blacks reporting significantly fewer instances of delinquency overall than whites, though this contrast was largely attributable to differences in minor delinquency. Whites reported more frequent drug use, gang fighting, stealing from family members, cheating, cursing, binge drinking, and fighting with either parent.

Jocks, school athletes, and frequent sports/exercise participants all scored significantly higher on the socioeconomic

Table 1 Descriptive characteristics of the weighted^a wave 3 sample,^b by race and gender

	All ^a	Male ^a (n = 274)	Female ^a (n = 331)	White (n = 424)	Black (n = 179)
Background characteristics (wave 1)					
Female	.55			.54	.56
Black	.14	.14	.15		
Age	14.42	14.41	14.43	14.43	14.39
SES	2.59	2.56	2.62	2.67	2.09***
GPA	5.20	4.93	5.42***	5.24	4.97*
Family cohesion	31.77	32.09	31.50	31.76	31.86
Delinquency score ^c	25.35	26.15	24.68	26.82	16.50***
Friend's delinquency score ^c	6.75	7.12	6.44 ⁺	6.90	5.83**
Predictors (wave 1)					
Jock identity	.35	.49	.23***	.37	.22**
Athlete status	.65	.74	.57***	.65	.65
Frequency sports (days/yr)	91.82	112.39	74.75***	94.12	77.97**
Deviance outcomes (wave 3)					
Total delinquency scale	50.23	55.38	45.96***	52.80	34.83***
Minor delinquency subscale	45.01	47.10	43.28 ⁺	47.38	30.80***
Major delinquency subscale	5.22	8.29	2.68***	5.42	4.03

⁺*p* < .10, **p* < .05, ***p* < .01, ****p* < .001. Asterisks indicate significant mean differences by gender or by race.

^aWhole-sample and gender-specific means are weighted to correct for oversampling of black adolescents; race-specific means are not.

^bAll means are derived from the wave-3 sample; 9 available wave-3 cases were excluded because the respondents had dropped out of school more than a year prior to the survey.

^cWave-1 delinquency measures for the respondent and the respondent's closest friend include 10 of the 17 items found in the wave-3 total delinquency measure: fighting with father or mother, violating curfew, lying, having sex, truancy, beating someone up, drug use, theft, and vandalism.

Table 2 Descriptive characteristics of the weighted^a wave 3 sample^b, by athletic involvement

	Nonjock (n = 394)	Jock (n = 208)	Non-athlete (n = 214)	Athlete (n = 391)	Infreq sports ^c (n = 200)	Frequent sports (n = 404)
Background chars (wave 1)						
Female	.65	.36***	.66	.48***	.73	.46***
Black	.17	.09**	.14	.14	.20	.12**
Age	14.46	14.34	14.44	14.41	14.45	14.41
SES	2.53	2.71*	2.41	2.69***	2.43	2.67**
GPA	5.13	5.33	5.02	5.30*	5.11	5.24
Family cohesion	31.31	32.63*	30.82	32.29*	31.37	31.95
Delinquency score ^d	24.44	27.29	26.52	24.71	23.32	26.39 ⁺
Friend's delinquency score ^d	6.57	7.13	6.88	6.68	6.86	6.70
Predictors (wave 1)						
Jock identity	–	–	.13	.46***	.17	.43***
Athlete status	.53	.86***	–	–	.44	.75***
Frequency sports (days/yr)	77.04	119.60***	61.06	108.60***	–	–
Deviance outcomes (wave 3)						
Total delinquency scale	46.36	57.88***	48.42	51.22	46.29	52.25*
Minor delinquency subscale	42.40	50.24***	43.52	45.83	42.18	46.46 ⁺
Major delinquency subscale	3.96	7.64***	4.90	5.40	4.10	5.78 ⁺

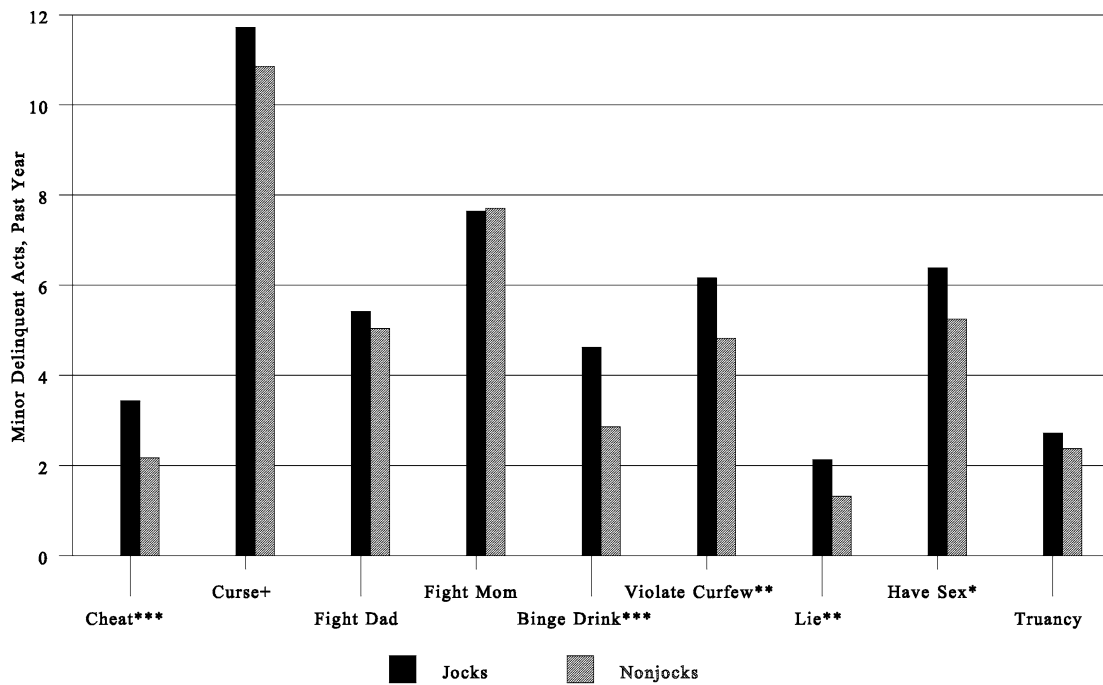
⁺*p* < .10, **p* < .05, ***p* < .01, ****p* < .001. Asterisks indicate significant mean differences by jock identity, athlete status, or frequent (at least once a week) sports/exercise activity.

^aAll means are weighted to correct for oversampling of black adolescents.

^bAll means are for wave 3; 9 respondents were excluded because they had dropped out of school more than a year prior to the survey.

^cFrequent sports was defined as participation in sports or exercise activity at least once a week.

^dWave-1 delinquency measures for the respondent and the respondent's closest friend include 10 of the 17 items found in the wave-3 total delinquency measure: fighting with father or mother, violating curfew, lying, having sex, truancy, beating someone up, drug use, theft, and vandalism.



+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$.

Fig. 1 Frequency of minor delinquent behaviors by jocks and nonjocks.

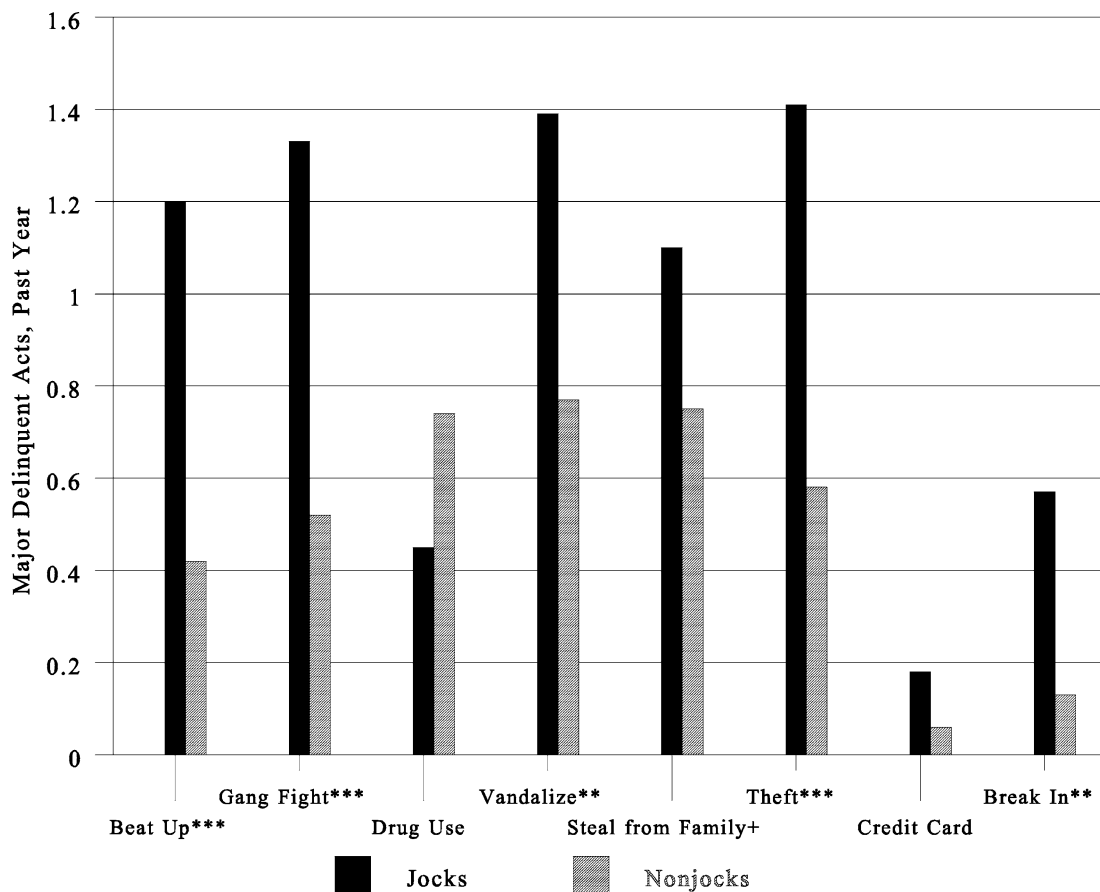
status measure than their less athletically-oriented counterparts (see Table 2). Unsurprisingly, respondents evidenced considerable overlap among the three types of athletic involvement. School athletes were significantly more likely than nonathletes to perceive themselves as jocks, and both jocks and school athletes reported significantly more frequent athletic activity than their nonjock or nonathlete peers. It is notable, however, that the overlap was not absolute; for example, 13% of nonathletes identified with the jock label, as did 17% of adolescents who engaged in athletic activity only infrequently. Moreover, the degree of overlap varied by both gender and race; while the correlation between jock identity and frequency of athletic activity was significant overall (.31, $p < .01$), probes showed that it was strongest for white girls (.34, $p < .01$), less strong but still significant for white boys (.21, $p < .01$), and not significant for black girls or boys (data not shown).

The three types of athletic involvement differed in another way as well. Although school athletes reported significantly more frequent instances of binge drinking than nonathletes, athlete status did not significantly predict minor, major, or overall delinquency. Frequent sports/exercise activity was weakly associated with overall delinquency, largely because frequent participants reported significantly more gang fighting and vandalism. In contrast, jocks reported significantly higher levels of minor, major, and overall delinquency than nonjocks. In fact, with the exception of drug use and fight-

ing with mother, jocks scored higher than nonjocks on every individual delinquency measure, with 10 measures reaching statistical significance and two more reaching marginal significance (see Figs. 1 and 2).

Multiple regression analyses

Table 3 shows the results of two multiple regression analyses predicting overall adolescent delinquency. The first model included only the main effects of the sociodemographic (gender, race, age, socioeconomic status), contextual predictor (school grades, family cohesion, prior delinquency, closest friend delinquency) and athletic involvement variables (jock identity, athlete status, frequency of athletic activity). Delinquency was marginally less frequent among females, significantly less frequent among blacks, and decreased with age. Higher grades and higher levels of family cohesion were negatively associated with delinquency, and prior reported delinquent behavior by the respondent and by her/his closest friend were strong predictors of subsequent delinquency. Net of all these effects, only one of the athletic involvement indicators predicted delinquent behavior: wave-one jock identity was significantly and positively associated with the frequency of overall wave-three delinquency. These findings were robust across both gender and race (Model 2).



+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$.

Fig. 2 Frequency of major delinquent behaviors by jocks and nonjocks.

Two supplemental analyses were conducted in order to determine if the facilitative effect of jock identity on delinquency differed by type of delinquency (Table 4). The same model was used to predict both delinquency subscales, differing only in the subscale-specific items included in the prior delinquency and friend's prior delinquency measures. Several differences emerged. Gender, age, school grades, and family cohesion significantly predicted major delinquency, but not minor delinquency, whereas race significantly predicted minor delinquency only. Unsurprisingly, prior behavior by the respondent and her/his closest friend were strong and significant predictors of both kinds of delinquency. Jock identity was positively associated with delinquency at both levels. Overall, the model was a better fit for minor delinquency, explaining 37% of variance compared to 25% of variance in major delinquency. A marginally significant interaction of race and jock identity for major delinquency invited closer examination. To probe this interaction, we conducted additional race-specific analyses. Jock identity was significantly associated with major delinquency for whites ($\beta = .13, p < .01$) but not for blacks (data not shown).

Discussion

Contrary to the assumptions of social bonds theory (Hirschi, 1969), we found no deterrent effect of sports on either minor or major adolescent delinquency. Net of the effects of demographic characteristics (i.e., gender, race, age, and socioeconomic status) and other contextual predictors (school grades, family cohesion, prior delinquency by the respondent, and prior delinquency by the respondent's closest friend), none of our three measures of athletic involvement—jock identity, athlete status, or frequency of athletic/exercise activity—was associated with a subsequent reduction in delinquent behavior. In fact, the only significant relationships between athletic involvement and delinquent outcomes were facilitative; jock identity was associated with higher levels of both minor and major delinquency. Either organized sports do not in fact significantly and reliably strengthen social bonds, or the posited effect is offset by other factors, such as positive deviance (Hughes and Coakley, 1991). It may also be that engagement with some sports buffers adolescents against delinquency more

Table 3 Unweighted regression analyses predicting wave 3 total delinquency (*n* = 597)

Independent variables ^b	Model 1	Model 2
	β	β
Female	-.07 ⁺	-.18*
Black	-.14***	-.16
Age	-.08*	-.09*
Socioeconomic status	.06	.05
GPA	-.08*	-.08*
Family cohesion	-.10**	-.10**
Respondent delinquency score ^c	.37***	.37***
Friend's delinquency score ^c	.15***	.16***
Jock identity	.10**	.11
Athlete status	.02	.01
Sport frequency	-.03	-.08
Female by black		.09
Female by jock identity		-.02
Female by athlete		.05
Female by sport frequency		.06
Black by jock identity		-.02
Black by athlete		-.09
Black by sport frequency		.07
Jock identity by athlete		.03
Jock identity by sport frequency		-.02
R ²	.35	.35

⁺*p* < .10, **p* < .05, ***p* < .01, ****p* < .001.

^aThe total delinquency scale sums responses to all 17 continuous, past-year variables.

^bAll independent variables are measured at wave 1; dependent variables are measured at wave 3.

^cWave-1 delinquency measures (respondent and friend) include: fighting with father or mother, violating curfew, lying, having sex, truancy, beating someone up, drug use, theft, and vandalism.

effectively than engagement with others, although our data did not permit direct examination of hypothesis.

The application of routine activities theory (Cohen and Felson, 1979) to the relationship between sport and delinquency is necessarily more narrowly focused. The theory does not lead intuitively to any particular hypothesis regarding the behavioral outcomes associated with a jock identity, nor does it speak to the likelihood that an adolescent will engage in such minor delinquent acts as arguing with a parent, telling a lie for personal gain, cheating on an exam, or cursing. However, routine activities theory does strongly imply that frequent athletic activity should correlate with fewer convenient chances to engage in delinquency, given the truncation of opportunity due to the presence of a capable guardian. Nevertheless, we found that athletic involvement did not protect against opportunistic delinquent acts such as truancy, vandalism or breaking and entering.

Previous studies of the relationship between sport and delinquency have routinely failed to distinguish among different dimensions of athletic involvement, such as athlete

Table 4 Unweighted regression analyses predicting wave 3 minor and (log-transformed) major delinquency (*n* = 597)

Independent variables ^c	Minor delinquency ^a	Major delinquency ^b
	β	β
Female	-.04	-.09*
Black	-.15***	-.07 ⁺
Age	-.04	-.18***
Socioeconomic status	.07 ⁺	-.00
GPA	-.07 ⁺	-.18***
Family cohesion	-.07 ⁺	-.18***
Respondent delinquency ^d	.42***	.15***
Friend delinquency ^d	.13**	.13**
Jock identity	.08*	.10*
Athlete status	.03	.07 ⁺
Sport frequency	-.02	-.01
R ²	.37	.25

⁺*p* < .10, **p* < .05, ***p* < .01, ****p* < .001.

^aMinor delinquency includes: copying answers, cursing, fighting with father, fighting with mother, binge drinking, violating curfew, lying, having sex, and truancy.

^bMajor delinquency includes: beating someone up, gang fighting, drug use, vandalism, stealing from a family member, theft, unauthorized financial transactions, and breaking and entering.

^cAll independent variables are measured at wave 1; dependent variables are measured at wave 3.

^dWave-1 minor delinquency measures (respondent and friend) include fighting with father or mother, violating curfew, lying, having sex, and truancy. Wave-1 major delinquency measures (respondent and friend) include beating someone up, drug use, theft, and vandalism.

status, frequency of athletic activity, and jock identity. Our findings in this study suggest that this omission needs to be addressed in future research. As anticipated, we found that separate dimensions operate differently; only jock identity was significantly associated with the frequency of delinquent behavior. This link was robust across both gender and race, and across both minor and major delinquency constructs. The hypothesis that effects would be stronger for black adolescents than for their white counterparts, derived from the work of Stark *et al.* (1987) and Hughes and Coakley (1991), was not supported. In fact, the only clear race difference that did emerge showed a stronger effect of jock identity on major deviance for whites than for blacks.

These findings add a new facet to an already complicated debate. At first blush, they provide support for a facilitative rather than deterrent effect of sports on adolescent delinquent behavior. Of the 17 specific behaviors examined, more than half were more common among jocks (Figs. 1 and 2). However, only subjective, and not objective, athletic involvement was consistently related to delinquency. What is it about a “jock” identity, distinct from actual participation in sports, that exacerbates adolescent deviance? Alternatively, what common factors influence adolescents both to break the rules and to perceive themselves as jocks?

Athletic behavior takes place within a conventional social context, generally involving adult supervision, structured guidance, and immersion in a social network that promotes at least some prosocial values. Subjective forms of athletic involvement are more nebulous in both definition and practice. A “jock” identity may place less emphasis on conformity to established norms and more emphasis on conformity to an ethic that combines elements of hegemonic masculinity, risk-taking, and personal exemption from ordinary rules. Miller and her colleagues have linked jock identity with problem drinking (Miller *et al.*, 2003), sexual risk-taking (Miller *et al.*, 2005), and peer violence (Miller *et al.*, 2006). Each of those behaviors is clearly consistent with a culturally dominant vision of what it means to be a man in the United States (Connell, 1995; Sabo and Runfola, 1980). The deviant behaviors examined in our study are less obviously derived from the imperatives of hegemonic masculinity, but they too may signal a disdain for conventional rules and restrictions and a willingness to prove oneself through risk-taking.

Several limitations of this study must be kept in mind, primarily stemming from the use of secondary data not originally designed to answer the research questions uppermost in this analysis. First, although a prospective, cross-lagged analysis would have been a better means of assessing causality, we lacked later-wave measures of jock identity as well as wave-one measures of 7 of the 10 outcome measures: cheating, cursing, binge drinking, gang fighting, stealing from a family member, using a credit card without authorization, or breaking and entering. Second, our measures of athletic involvement did not permit us to distinguish among contact vs. noncontact sports or individual vs. team participation. This unavoidable conflation of several very different experiential contexts may help to explain why we found no significant relationships between objective athletic participation and deviant outcomes. Nor were we able to assess the subjective meanings that adolescents assign to the concept of “jock” identity. Third, our sample was representative of the Western New York region only. Further research needs to extend the analysis to a larger, more diverse population, drawing on qualitative studies of adolescent self-identity as well as externally verifiable indicators of athletic participation.

These findings provide partial support for a facilitative explanation of the linkage between athletic involvement and adolescent delinquency, but they do not close the book on the deterrence vs. facilitation debate. They do, however, bolster the call for a more nuanced understanding of just what athletic involvement is. Millions of U.S. adolescents routinely make sport a part of their lives; it resides in our schools and our communities, leaves an indelible imprint on the popular imagination, and is infused to varying degrees throughout cultures worldwide. Conventional wisdom assigns youth sports a uniquely salutary place in the roster of influences

on adolescent development, through its presumed capacity to build character, teach social skills, and establish valuable social networks. Given the disjuncture between such global assumptions and the findings of this and other recent studies, it is clear that the evolution of more comprehensive measures that capture the complexity and context of the lived athletic experience is long overdue.

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