

Participation in college sports and protection from sexual victimization

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Words:

ABSTRACT

Some sociologists have argued that sport is a male-dominated institution and sexist culture in which female athletes experience various forms of discrimination, including sexual harassment from coaches and male athletes. Some research does indicate that female athletes suffer higher rates of sexual victimization from authority figures in sport than their nonathletic counterparts in education and the workplace. In contrast, researchers have also speculated that athletic participation can protect female athletes from sexual victimization through a variety of social-psychological mechanisms such as team membership, physical strength, and self-confidence. This paper reports on the first descriptive analysis to test the “sport protection hypothesis” among both female and male athletes, using cross-tabulation secondary analyses of data from the National College Health Risk Behavior Survey, conducted in 1995 by the U.S. Centers for Disease Control and Prevention (N=4814). USA college students of traditional undergraduate age (aged 18-24) were included in the sample (N=2903). Some limited support for the protection hypothesis was found, and student athletes were significantly less likely to report sexual victimization during their late high school and early college years than their nonathletic counterparts. A gender gap in the pattern of sexual victimization also appeared between males and females across all student age groups, with females experiencing more sexual victimization than males. However, no significant gender gap was found among athletes. The results are discussed in relation to previous studies of campus athletes and to college prevention policy.

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Previous research on sexual harassment and abuse in sport has been generally guided by larger assumptions about the pattern of gender relations in sport. In what might be called the “facilitation hypothesis,” scholars conceptualized sport as a male-dominated culture that fostered traditionally masculine attitudes toward sexuality and women (Messner & Sabo, 1994). Girls and women who entered sport settings challenged longstanding patterns of sex segregation and supremacist notions about masculinity. Female athletes were viewed as interlopers in a predominantly masculine culture and were sometimes the recipients of derision or antagonism. Males also occupied most positions of authority in sport administration and coaching, whereas female athletes were relatively powerless. These cultural, political, and organizational factors were hypothesized to elevate the risk of sexual harassment in sport settings.

In contrast, a variety of sport researchers have suggested that sport is a social and educational asset for girls, a cultural site that spurs psychosocial development in propitious ways. Athletic participation was found to enhance girls’ self-esteem, body concept, and self-efficacy (Pedersen & Seidman, 2004; Sabo, Miller, Melnick & Heywood, 2004; The President’s Council on Physical Fitness and Sports Report, 1997). Female high school athletes in the USA were more likely than female nonathletes to secure educational gains including higher scores on science and mathematics tests (Hanson & Kraus, 1998) and an increased likelihood of college attendance (Sabo, Melnick & Vanfossen, 1989). Female adolescent athletic participation was also found to be associated with favorable health outcomes, such as lower rates of illicit drug use (Miller, Sabo,

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Melnick, Farrell & Barnes, 2001). Finally, a nationwide study of USA adolescents found that female athletes, when compared with nonathletes, had lower rates of unwanted pregnancy, had their first sexual experience later, and reported lower numbers of sexual partners (Miller, Sabo, Farrell, Barnes & Melnick, 1998, 1999). These findings suggest that sport is a source of empowerment in many girls' lives.

Within the context of research and theory on sexual harassment prevention, to the extent that athletic participation empowers girls' bodies, identities, and choices about dating and sexuality, it can be said to protect them from some forms of sexual victimization. For example, the "sport protection hypothesis" (Fasting et al., 2003) suggests that females develop strength, self-confidence and a sense of physical adeptness through their sports experiences. These traits or skills have been associated with resistance and rape avoidance (Bart, 1981).

While the possibility that sport participation affords protection against sexual exploitation has not yet been systematically tested, it has been explored as a facet of a few previous investigations (Fasting, Brackenridge & Sundgot-Borgen, 2000; Volkwein & Devlin, 2000). Also, some evidence has been generated that verifies that sport constitutes a more hazardous environment for sexual exploitation of female athletes perpetrated by authority figures (Fasting, et al 2000; Fasting, Brackenridge & Sundgot-Borgen, 2003). Finally, previous studies have focused solely on the sexual victimization of women in sport. Several incidents of sexual victimization of male athletes by male coaches and

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during hazing rites, however, were documented during the 1990s in North America (Robinson, 1998; Bryshun & Young, 1999; Kirby & Wintrup, 2002). Child rape in the US Catholic Church and the increasing recognition of man-on-man rape in prison settings (Sabo, Kupers & London, 2001) have expanded awareness of males as victims (as well as perpetrators) of sexual assault and abuse.

In this article we report on the first nationwide descriptive study to explore some basic tenets of the sport protection hypothesis for both females and males. The overarching research question was to determine if athletic participation was associated with reduced incidence of reported sexual victimization among both female and male US college students. We conducted a secondary analysis of data from the National College Health Risk Behavior Survey, gathered in 1995 by the US Centers for Disease Control and Prevention. For the purposes of this article the term 'sexual victimization' (SV) refers to serious sexual assault/abuse/forced intercourse.

LITERATURE REVIEW

Sport participation has traditionally been justified with a number of rationales that include health and fitness, citizenship, personal discipline and military readiness, cultural superiority and economic productivity (Hutchinson, 1996; Mason, 1989; McIntosh, 1968). Sport has also been promoted as a tool for building psychological resilience, self-confidence and self-esteem, especially among women; together, these enhanced psychosocial resources are said to enable resistance against rape, harassment and sexual assault (Foon, 1989;

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Bart, 1981). Indeed, empowerment has become a popular theme in the literature on women and girls in sport and one of the main reasons for promoting sport to females (Choi, 2001).

Studies of SV *outside* sport have repeatedly shown that those most susceptible to approaches by sex offenders demonstrate weakness or vulnerability of some kind and are thus easier to 'groom' prior to abuse or assault (Brackenridge, 2001; Kerr, 1999; Toftegaard Nielsen, 2001).¹ In their study of elite female athletes in Norway, Fasting et al. (2000, 2003) found that athletes experienced less sexual harassment outside sport than the non-athlete control group did outside work or college, which lends some support to the protection hypothesis. However, the Norwegian study also showed that *higher* rates of sexual harassment were perpetrated by sport authority figures against athletes than were perpetrated against the controls by authority figures in education or business. Very few cases of "serious" harassment or abuse were reported in this study, however, so it is unclear whether any protective effect of sport might relate to SV as understood here. In a study of 595 female athletes in the Czech Republic, Fasting and Knorre (2005) surveyed the participants' experiences of sexual harassment inside and outside a sport setting. The results indicated that, compared with being merely an exerciser, being a competitive athlete may protect one from being harassed outside sport. Inside sport, however, the highest risks accrued to the best athletes (Fasting & Knorre 2005).

In their study of student athletes' experiences of sexual harassment in the US, Volkwein and Devlin (2000) found that female student athletes suffered more

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from sexual harassment in their sports than non-athlete students did in the academic environment. Kirby and Greaves (1996), who surveyed Olympians in Canada, found coaches to be almost six times more likely than peer athletes to perpetrate sexual harassment on female athletes. Leahy et al. (2001, 2002) surveyed elite athletes in Australia and distinguished between harassment and abuse using legal thresholds. They found that, of those who had experienced sexual abuse at some point in their lives (31% of female athletes and 21% of male athletes), 41% of the female group and 29% of the male group had been sexually abused within the sports environment. These findings thus indicate that sport is not an unequivocally safe place for female athletes. Interestingly, although there is evidence that male athletes are over-represented as perpetrators of sexual assaults on campus (Crosset, Benedict & McDonald, 1995; Pike Masteralexis, 1995), no studies to date have examined links between athletic status and SV risk for males.

Sexual harassment in college life has been the subject of several previous studies (Cleary et al., 1994; Connolly & Marshall, 1989; Hoffman, 1986; Rosenberg Zalk, 1991) and some studies have investigated student athletes' sexual harassment experiences (Hervik 2005; Volkwein et al., 1997; Wolohan, 1995). However, access to data about serious SV in relation to college athletes has proven problematic in the past (Brackenridge, 2001). Without clinical or criminology credentials, for example, social scientists are often disbarred from rights of access to police reports and prison data. Also, ethical strictures are especially stringent in the case of data about sex offending, and few sources of

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sex offense data in general identify sport-related variables (such as type of sport or athletic status). This study offers rare access to a dataset that includes variables about both athletic participation *and* experience of SV. The potential benefits of this type of investigation are enormous for all advocates of sports and recreation for children and young people as well as for university authorities and agencies concerned with the prevention of sex victimization, in all its manifestations.

METHODS

Sample description

The analysis used the 1995 National College Health Risk Behavior Survey, conducted by the U.S. Centers for Disease Control and Prevention for the purpose of monitoring the prevalence of priority health-risk behaviors in college students nationwide. The target population for this study consisted of all U.S. undergraduate students aged 18 or older, enrolled at universities or colleges offering at least a 2-year degree program (N=4814). For the purposes of this analysis, only college students of traditional undergraduate age (aged 18-24) were included in the sample (N=2903). Women accounted for 58.7% (n=1704) of this sample; the remaining 41.3% (n=1199) were men. Although all respondents were officially listed by their institutions as undergraduates at the time of the study, 5.8% (n=169) identified themselves as having another class standing (including graduate and “other” students).

Approximately one fourth (25.2%) of respondents reported participating on either an intermural or intramural college sports team during the year prior to the

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survey. Men were significantly more likely than women to be college athletes ($p < .001$) with one in three (34.6%) males and one in six (16.4%) females reporting participation on a sports team.

The mean age of the sample was 20.56 years. Athletes were over-represented in their age groups up to the age of 20 but, thereafter, under-represented (data not shown). This perhaps reflects increasing maturity, 'natural' drift away from sports with age, and increasing prioritization of academics over sports in the life of these students as they grow older. Athletes were significantly younger than non-athletes ($p < .001$), with average ages of 20.25 years and 20.67 years respectively. The age difference between athletes and non-athletes was also statistically significant within each gender.

Survey design

To generate a nationally representative sample of U.S. college students, the NCHRBS employed a 2-stage cluster sample design. First, the nation was broken down into 2919 primary sampling units (PSUs), consisting of public and private 2- and 4-year colleges and universities. Seventy-four 2-year institutions and 74 4-year institutions were selected from 16 strata, formed on the basis of the relative percentage of black and Hispanic students in each. The institutions were selected with probability proportional to the size of undergraduate enrollment. Ninety-two percent of the chosen institutions ($N=136$) agreed to participate in the survey.

At the second stage, a simple random sample was drawn from a roster of full-time and part-time undergraduate students aged 18 or older enrolled in the

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selected colleges and universities. Black and Hispanic students were deliberately oversampled. To correct for expected differential rates of student nonresponse and ineligibility, 72 students were chosen from each 2-year institution and 56 from each 4-year institution, totaling 8,810 students. Of these, 7,442 were eligible for the study, and 65% of these eligible respondents completed the questionnaire, for an overall survey response rate of 60% (N=4814). As just mentioned, only young adult students (aged 18-24) are included in the present analysis (N=2903).

A weighting factor was applied to each student record to adjust for school and student nonresponse and the oversampling of students of color. The sample was poststratified by race/ethnicity, sex, and institution type (2-year or 4-year) to conform to estimated national proportions, and overall weights were scaled so that the weighted and unweighted counts of respondents were the same.

Student privacy was protected by survey procedures designed to ensure anonymous and voluntary participation. Self-administered questionnaires, available in both English and Spanish versions, were mailed to students in the sample. Students recorded their responses directly on a computer-scannable booklet. As an incentive, one student at each participating institution was selected through random drawing to receive a \$100 U.S. Savings Bond. Multiple mail and telephone follow-ups were employed to maximize the response rate.

Variables

Sexual victimization: Sexual victimization variables were derived from three questions included in the NCHRBS. Respondents were asked if they had ever in

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their lives been forced to have sexual intercourse against their will. Additional questions asked how old the respondent was on the first, and last, occasions of forced sexual intercourse. Responses to the questions about age at first/last victimization included (1) never, (2) 4 yrs old or younger, (3) 5-12 yrs old, (4) 13 or 14, (5) 15 or 16, (6) 17 or 18, (7) 19 or 20, (8) 21-24, and (9) 25 yrs old or older. Responses were recoded to the age-numeric midpoint of each category (e.g., “5-12 yrs old” was recoded as 8.5, “13 or 14 yrs old” was recoded as 13.5, etc.). From these three initial questions, we derived five measures of SV history:

1) **Ever forced:** Has the respondent ever been forced to have sexual intercourse against her/his will? (0=no, 1=yes)

2) **Recently forced:** Has the respondent been forced to have sexual intercourse against her/his will in the past two years? (0=no, 1=yes). This variable was derived by subtracting the recoded midpoint value of “age last forced” from the recoded midpoint value of “age.”

3) **Repeatedly forced:** Has the respondent been forced to have sexual intercourse against her/his will more than once? (0=no, 1=yes). This variable was derived by subtracting the recoded midpoint value of “age first forced” from the recoded midpoint value of “age last forced.” If the resulting value was greater than zero, the respondent was coded as having been forced more than once. This variable is a crude proxy for repeated victimization, in that it does not measure actual frequency of victimization and in fact may underestimate incidence because it cannot rule out multiple instances of sexual victimization within a single year.

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4) **Forced before age 15:** Was the respondent ever forced to have sexual intercourse against her/his will prior to age 15? (0=no, 1=yes). This variable was derived by dichotomously recoding responses to the question about age at first experience of forced intercourse.

5) **Forced at age 17+:** Was the respondent ever forced to have sexual intercourse against her/his will at the age of 17 or older? (0=no, 1=yes). This variable was derived by dichotomously recoding responses to the question against age at last experience of forced intercourse. The variable was designed to assess college-age experience of forced intercourse. Most traditional-age students make the transition from high school to college between age 17 and age 18; however, since sexual victimization experiences at age 17 could not be disaggregated from those at age 18, both were included. Two versions of this variable are available: one including the sample as a whole, the other including only those respondents who reported no experience of sexual victimization prior to age 17.

Athletic status: Respondents were asked, “During this school year, on how many college sports teams (intramural or extramural) did you participate?” Those who indicated participation on at least one team were coded as college athletes (=1); those who did not participate on any teams were coded as nonathletes (=0).

Control variables: In this exploratory study, we have controlled for the age and sex of respondents only. Due to the small number of respondents reporting a history of sexual victimization, breakdowns by race/ethnicity, class, work status, marital status, or living arrangements were not practical. No data were available

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to measure socioeconomic status.

Analysis

In order to accommodate the complex two-stage cluster sample design of the NCHRBS data set, all analyses were conducted using the Stata statistical data analysis package (StataCorp, 2001). Due to the small number of respondents reporting a history of SV, relative to the large size of the overall sample, there was insufficient statistical power to conduct meaningful tests of significance on multivariate analytical designs. Therefore, analyses are descriptive only and should be considered exploratory rather than definitive.

RESULTS

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Athletes were significantly less likely than nonathletes to report ever having been forced to have sexual intercourse against their will ($p < .001$), lending some support to the protection hypothesis (Table 1). Within each gender, athletes reported lower SV rates than non-athletes, but these trends did not reach statistical significance. However, comparisons across the genders were also instructive. Female athletes (14.5%) were nearly five times more likely to experience SV than male athletes (2.9%), and female non-athletes (17.4%) more than four times more likely to experience SV than male non-athletes (4.1%). Given the low numbers of males reporting here it would be unwise to make comparisons with population studies of SV more generally, but it is certainly common to find females at significantly higher risk of SV than males (Brackenridge, 2001).

[Insert Table 1 about here]

Among college students who had ever been forced to have sexual intercourse against their will, athletes also reported lower incidence of repeated sexual victimization than non-athletes ($p < .01$), lending additional support to the protection hypothesis. Again, however, this finding was not statistically significant for each gender separately, a likely artifact of the very low incidence of repeated victimization (Table 2).

[Insert Table 2 about here]

In contrast, athletes did not differ significantly from their non-athletic peers with respect to sexual victimization prior to age 15 (Table 3). This finding militates against a selection explanation for the later protection effect of sports. That is, if

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lower SV rates for athletes occurred because sexually victimized children and early adolescents were less likely to seek out participation in sports programs (selection effect), then differences in early SV rates between athletes and non-athletes should be acute.

[Insert Table 3 about here]

Sexual victimization most commonly begins prior to the commencement of college. Among the sample as a whole, the mean age of first sexual victimization was 15.14 years, with females (15.46 years) marginally older than males (13.41 years) at initial incidence ($p < .10$). Athletes and non-athletes did not differ significantly in their patterns of age-related risk of SV. Among SV survivors (students who reported having been sexually victimized at least once in their lives), age at first victimization was not predicted by athlete status for the overall sample (Table 4) or for either gender specifically (Table 5). The late high school and early college years appeared to be particularly risky for female students in particular (peak risk around age 17-18), whereas male risk was greatest before puberty (age 5-12).

[Insert Table 4 about here]

[Insert Table 5 about here]

Table 6 excludes cases where respondents report being forced to have sexual intercourse at age 16 or younger. Therefore, it constitutes by implication an assessment of the association between athletic status and first forced sexual experience at age 17 or older. That is, of those respondents who had never been forced to have sex prior to college age, those who participated in college sports

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overall were at less risk for an initial occurrence than those who did not ($p < .01$). Possibly due to small sample artifact, this relationship was not significant when male athlete and female athletes are analyzed separately.

[Insert Table 6 about here]

Table 7 compares respondents who were forced to have sexual intercourse at age 17 or older (regardless of earlier experience with forced sex) with those who were not, by athletic status. Therefore, it constitutes, by implication, an assessment of the association between athletic status and any forced sexual experience at age 17 or older. Athletes were at less overall risk for an initial or continuing occurrence of forced sexual intercourse than were nonathletes ($p < .01$).

[Insert Table 7 about here]

DISCUSSION

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According to the data presented here, being a student athlete is associated with lower odds of SV during the college years. This could be because people who have been sexually victimized are less likely to go into collegiate sports or because college sports afford students some protection against SV, or a combination of these things, or for some other reason. It seems that perhaps for females the latter explanation may apply whereas for males the former may do so since most males who have been sexually victimized experienced this *before* the age of 15 (in other words prior to their college years) and most women who had been sexually victimized experienced this *after* the age of 15.

Without knowing more about the type of SV experienced, and the perpetrators (family, peer or stranger), it is difficult to understand the variations in age-related risks. It is also possible that peer-generated SV (through date rape, acquaintance rape, hazing-related acts or other sources) comprised a proportion of the SV experiences of the students in their late high school and early college years, but this cannot be discerned from the present data (Benedict, 1997, 1998; Benedict and Klein, 1997). In the Norwegian study (Fasting *et al.*, 2000) both female athletes and nonathlete controls were much more likely to be sexually harassed by their athlete peers than by sport authority figures or others outside sport.

Early sport sociology tended to characterize sport as what might be called a patriarchal gender regime or masculinist monolith (Oglesby, 1978; Sabo & Runfola, 1980; Theberge, 1981). Second Wave feminists tended to characterize

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women's entrance or participation inside sport as "intruding" on male cultural terrain, or cast women as victims of discrimination in male-dominated sport. Yet the perception of women in sport or the theorization of women in sport during the 1990s problematized these positions as it became more nuanced (Hargreaves, 1994; Hall, 1996). According to these more recent theoretical reformulations, sport began to be viewed as both an arena of structural gender discrimination against women but *also* a cultural vehicle for the expression of agency, resistance and for psychosocial empowerment. Examining linkages between high school athletic participation and adolescent health behaviors, Miller, Sabo, Melnick, Farrell, and Barnes (2000) also showed that both boys and girls experienced certain health benefits as a concomitant of athletic participation.

So, the results from this study of college athletic participation and SV point to a contradiction. We know that women athletes experience sexual harassment yet we also suspect that, for some women, developing an athletic identity and/or living in the social psychological context of sport may *reduce* their risk for sexual victimization. This apparent contradiction not only opens up further empirical enquiries, but may also assist in theoretical development of ideas about individual agency and resistance in sport. Further, by highlighting a positive message about sports participation and SV risk reduction, it could also help to rehabilitate this area of research in a professional sports world that has been staunchly reluctant to engage in policy development or harm reduction measures (Brackenridge, 2001).

LIMITATIONS

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The general limitations of research in this field are now reasonably well-documented (see, for example Brackenridge, 2001, pp. 49-53). Development of a consensus regarding the nature and implications of sexual victimization, let alone the impact of athletic participation on such victimization, has been hampered by a variety of obstacles, including inconsistencies in definitions; source of reports; sampling; purpose of the study; ethics and consent procedures; instrument administration protocols; specificity of questions; nonresponse rates and underreporting; validity and reliability of measures; and quantitative vs. qualitative research designs.

The current study also exhibits a number of design limitations. The National College Health Risk Behavior Survey (NCHRBS) data set was designed to measure health risk behavior, and it therefore takes an epidemiological approach. Because the study is based on secondary analysis of pre-existing data, the research design and question structure could not be altered for the analysis presented here. The original measurement instrument did not include a number of variables that would have been useful for this analysis, specifically:

* **Level of sport performance.** In the main, other studies have focused on national/international level athletes and have found risk of SV higher in elite level performers.

Sport type. Since the NCHRBS asked only about generic college sports team participation, no cross-sport analysis could be conducted. This omission was regrettable, since an analysis of sport differences would have been especially helpful in testing Brackenridge and Kirby's (1997) hypothesis about the

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Stage of Imminent Achievement, which suggests that peak vulnerability for SV occurs just before the peak age for a given sport.

Source(s) of SV. The implications of sexual victimization may differ depending on whether it is perpetrated in an athletic, familial, or other context.

Duration of the SV. The NCHRBS coding system adopted could not reveal whether multiple instances of SV were experienced within a single year, rendering our measure of repeated victimization necessarily crude.

Modus operandi of the perpetrator(s). Patterns of sexual victimization, including whether abuses were perpetrated by *multiple* or *single* individuals, may moderate the protective effect of athletic participation.

Socio-economic status. The victim's socio-economic background may well condition the body of psychological, social network, and financial resources upon which he or she may draw in order to resist victimization.

Other demographic characteristics. For example, the NCHRBS did not provide information with respect to geographic location (state or region) or (dis)ability status.

Since the number of prevalence studies of SV in sport is so small, and each study has adopted very different definitions, designs and sampling frames, it is not possible to make international comparisons. The overall population here comprises students, with nonathletes as the control group. No non-student controls are/were available for the USA. Importantly, the data were collected retrospectively, that is from the memories of young adults, so the usual caveats

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therefore apply about memory attrition, memory distortion, and so-called 'false' memory that might have distorted the data on SV.

Obviously, the less often instances of SV occur, the better. Ironically, though, the lower the frequency of occurrence, the more difficult it is for social researchers to study, understand, and design policy to prevent future victimization. The percentages in this survey translate into very low numbers so there is insufficient statistical power to conduct multivariate controlling for a range of potentially confounding factors, such as race, ethnicity, and socioeconomic status. There is clearly a need to gather more, larger datasets to explore these different relationships. Many of the datasets that *are* available come from samples based on court convictions which are therefore skewed since it is known that attrition rates (drop off between allegation and conviction) are very high indeed (Brackenridge et al., 2005; Finkelhor & Williams, 1988).

It is also important to acknowledge the contribution of qualitative research to understanding in this field. Qualitative studies have already been used to great effect in the development of risk analysis and protective policies (Boocock, 2002; Brackenridge & Fasting, 2002; Brackenridge, 1997; Cense & Brackenridge, 2001). Notwithstanding these limitations, this dataset offers unique access to data of a scale and type previously unavailable.

CONCLUSIONS

This investigation has uncovered some suggestive results that lend limited support to the protection hypothesis. The data can also be viewed in the context of other research findings that suggest some kind of protection processes

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associated with or mediated through athletic participation, notably the Norwegian Women Project (Fasting et al., 2000), the Czech study on women and sport (Fasting & Knorre 2005), and studies of the protective effects of US high school sports on adolescent pregnancy (Miller, Barnes, Melnick, Sabo, & Farrell, 2002; Sabo, Miller, Farrell, Barnes & Melnick, 1998), suicidality (Sabo, Miller, Melnick, Farrell, & Barnes, 2005), and substance use (Melnick, Miller, Sabo, Farrell, & Barnes, 2001; Miller et al., 2001). The findings both point to the need for further research and also suggest the need for theoretical revision.

NOTES

- 1 'Grooming' is the term used to describe the process by which a sexual abuser prepares his victim for actual abuse. It usually involves the gradual transgression of interpersonal and sexual boundaries through establishing trust, friendship and exchanging favors (see Brackenridge, 2001 and Toftegaard Nielsen, 2001).

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Table 1. Ever forced to have sexual intercourse, by sex and athletic status

	Non-athlete (n=2215)		Athlete (n=646)		Total (n=2861)	
	%	(n)	%	(n)	%	(n)
Female (n=1682)	17.4	(253)	14.5	(39)	16.9	(292)
Male (n=1179)	4.1	(29)	2.9	(9)	3.7	(38)
Total (n=2861)	11.8	(282)	6.9	(48)	10.5	(330)

MISSING: n=42 (1.4%) Total: p<.001 Female: ns Male: ns

Table 2. Forced to have sexual intercourse more than once, by sex and athletic status

	Non-athlete (n=2209)		Athlete (n=644)		Total (n=2853)	
	%	(n)	%	(n)	%	(n)
Female (n=1677)	3.1	(50)	1.8	(5)	2.9	(55)
Male (n=1176)	0.9	(8)	0.0	(0)	0.6	(8)
Total (n=2853)	2.2	(58)	0.6	(5)	1.8	(63)

MISSING: n=50 (1.7%) Total: p<.01 Female: ns Male: p<.1

Table 3. Forced to have sexual intercourse before age 15, by sex and athletic status

	Non-athlete (n=2210)		Athlete (n=645)		Total (n=2855)	
	%	(n)	%	(n)	%	(n)
Female (n=1679)	4.3	(71)	3.6	(11)	4.2	(82)
Male (n=1176)	1.9	(15)	1.6	(4)	1.8	(19)
Total (n=2855)	3.3	(86)	2.3	(15)	3.0	(101)

MISSING: n=48 (1.7%) Total: ns Female: ns Male: ns

Table 4. Age first forced to have sexual intercourse, by athletic status (SV survivors only)

	Non-athlete (n=277)		Athlete (n=47)		Total (n=324)	
	%	(n)	%	(n)	%	(n)
0 to 4 years	3.9	(11)	1.8	(1)	3.6	(12)
5 to 12 years	14.7	(48)	17.5	(9)	15.1	(57)
13 or 14 years	9.9	(27)	14.6	(5)	10.7	(32)
15 or 16 years	25.6	(71)	23.3	(11)	25.3	(82)
17 or 18 years	30.2	(75)	25.2	(11)	29.4	(86)
19 or 20 years	11.8	(33)	17.6	(10)	12.8	(43)
21 to 24 years	3.8	(12)	0.0	(0)	3.2	(12)

MISSING: n=7 (2.1%)

ns

Table 5. Age first forced to have sexual intercourse, by sex and athletic status (SV survivors only)

	Female Non-athlete (n=250)		Female Athlete (n=39)		Male Non-athlete (n=27)		Male Athlete (n=8)	
	%	(n)	%	(n)	%	(n)	%	(n)
0 to 4 yrs	2.7	(8)	2.5	(1)	11.9	(3)	0.0	(0)
5 to 12 yrs	12.0	(38)	13.1	(7)	31.9	(10)	30.0	(2)
13 or 14 yrs	10.3	(25)	9.4	(3)	7.3	(2)	29.3	(2)
15 or 16 yrs	27.4	(66)	28.4	(10)	13.9	(5)	8.9	(1)
17 or 18 yrs	33.6	(73)	30.4	(10)	8.4	(2)	10.6	(1)
19 or 20 yrs	10.8	(30)	16.3	(8)	18.4	(3)	21.2	(2)
21 to 24 yrs	3.1	(10)	0.0	(0)	8.2	(2)	0.0	(0)
MISSING: n=7 (2.1%)			Female: ns		Male: ns			

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Table 6. First forced to have sexual intercourse at age 17+ (excluding those forced prior to age 17), by sex and athletic status

	Non-athlete (n=2053)		Athlete (n=619)		Total (n=2672)	
	%	(n)	%	(n)	%	(n)
Female (n=1521)	9.0	(113)	7.3	(18)	8.7	(131)
Male (n=1151)	1.3	(7)	0.9	(3)	1.2	(10)
Total (n=2672)	5.6	(120)	3.0	(21)	4.9	(141)

MISSING: n=231 (8.0%) Total: p<.01 Female: ns Male: ns

Table 7. Forced to have sexual intercourse at age 17+, by sex and athletic status

	Nonathlete (n=2210)		Athlete (n=644)		Total (n=2854)	
	%	(n)	%	(n)	%	(n)
Female (n=1678)	9.7	(134)	7.3	(19)	9.3	(153)
Male (n=1176)	1.6	(10)	0.8	(3)	1.4	(13)
Total (n=2854)	6.3	(144)	3.0	(22)	5.5	(166)

MISSING: n=49 (1.7%) Total: p<.01 Female: ns Male: ns