PARTICIPATION IN COLLEGE SPORTS AND PROTECTION FROM SEXUAL VICTIMIZATION

Kari Fasting¹, Celia H. Brackenridge², Kathleen E. Miller³, and Don Sabo⁴

¹Norwegian School of Sport Sciences, Norway

²Brunel University, United Kingdom

³University of Buffalo, United States of America

⁴D'Youville College, Buffalo, United States of America

ABSTRACT

Some sport sociologists have argued that sport is a male-dominated institution and sexist culture in which female athletes experience various forms of discrimination, including sexual victimization from coaches and male athletes. Previous research does indicate that female athletes suffer higher rates of sexual victimization from authority figures in sport than their non-athletic counterparts in education and the workplace, although many studies fail to differentiate adequately between sexual harassment, sexual abuse, sexual assault, and other descriptions that imply variations in the severity of victimization. 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 = 4,814). United States college students of traditional undergraduate age (18-24) were included in the sample (N = 2,903). Limited support for the protection hypothesis was found. Student athletes were significantly less likely to report sexual victimization during their late high school and early college years than their non-athletic counterparts. A gender gap in the pattern of reported sexual victimization also appeared between males and females across all student age groups, with females reporting more sexual victimization than males. However, no significant gender gap was found among athletes. The results are discussed in relation to student gender, athletic status, and concomitant health benefits and also to debates about agency and resilience among athletes.

Keywords: athletics, gender difference, sexual abuse, protection hypothesis, resilience

Corresponding author: Professor Kari Fasting, NIH, Box, 4014, Ullevål Stadion, 0806 Oslo, Norway. Email:Kari.fasting@nih.no 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 victimization 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; President's Council on Physical Fitness and Sports Report, 1997; Sabo, Miller, Melnick, & Heywood, 2004). Female high school athletes in the US were more likely than female non-athletes to secure educational gains, including higher scores on science and mathematics tests (Hanson & Krause, 1999) 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, Melnick, Farrell, & Barnes, 2000). Finally, a nationwide study of adolescents in the US found that female athletes, when compared with non-athletes, 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 prevention of sexual victimization, to the extent that athletic participation empowers girls' bodies, identities, and choices about dating and sexuality, it might be said to afford them some protection. For example, the "sport protection hypothesis" (Fasting, Brackenridge, & Sundgot-Borgen, 2003) suggests that females develop strength, self-confidence, and a sense of physical adeptness through their sports experiences. However, we acknowledge that this assumption is highly contested, especially in light of the shift since the 1980s away from victim-blaming discourses that focused on the victim's role in preventing sexual victimization (e.g., Bart, 1981) toward a more politicized perspective that focuses more directly on perpetrator responsibility.

While the possibility that sport participation affords some protection against sexual victimization has not yet been systematically tested, it has been explored as a facet of a few previous investigations (Kirby & Greaves, 1996; Leahy, Pretty, & Tenenbaum, 2001, 2002). Also, some evidence has been generated that verifies that sport constitutes a more hazardous environment for sexual victimization of female athletes perpetrated by authority figures (Fasting, Brackenridge, & Sundgot-Borgen, 2000; Fasting et al., 2003). Finally, with some notable exceptions (such as Kirby & Greaves, 1996; Leahy, Pretty,

& Tenenbaum, 2002, 2003, 2004), most previous studies have focused solely on the sexual victimization of women in sport. Several incidents of sexual victimization during hazing rites and of male athletes by male coaches were documented during the 1990s in North America (Bryshun & Young, 1999; Kirby & Wintrup, 2002; Robinson, 1998). 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 victimization.

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 U.S. Centers for Disease Control and Prevention. For the purposes of the original data collection exercise, the term "sexual victimization" referred to forced, penetrative sexual intercourse. We have therefore adopted the same interpretation here. This clearly locates the focus of this study at the extreme end of a continuum of sexual exploitation that is discussed and problematized below.

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. Indeed, empowerment has become a popular theme in the literature on women and girls in sport and one of the benefits reported by young women and girls who participate in sport (Choi, 2001).

The terminology associated with many previous research studies on different forms of sexual victimization in sport has been so varied that it is not possible to make justifiable comparisons between them. Brackenridge's (2001) continuum of sexual exploitation posits sexual abuse as a sub-set of harassment, sexual harassment as a sub-set of sex discrimination, and all these as forms of sexual exploitation. The use of such continua is not new (see Kelly, 1987) and certainly does not resolve some of the difficulties of subjectivity that beset victims for whom trauma does not necessarily align with linear descriptions. However, it does allow us to conceptualize, if crudely, different degrees of severity in sexual exploitation, with sexual victimization here associated with the extreme end of this continuum.

Several previous studies of sexual exploitation in sport, including those on student athletes, have focused on reported experiences of harassment (i.e., behavior falling in the middle of the continuum rather than at the extreme end; Cleary et al., 1994; Connolly & Marshall, 1989; Fasting et al., 2000, 2003; Hervik, 2005; Hoffman, 1986; Rosenberg Zalk, 1991; Volkwein, Schnell, Livezey, & Sherwood, 1997). However, in a survey of Olympians in Canada, which included definitions of both of rape and sexual assault (i.e., meeting our definition of sexual victimization) and also incorporated less severe definitions of sexual harassment, Kirby and Greaves (1996) found coaches to be almost six times more likely than peer athletes to be nominated as perpetrators against female athletes. More than one in five respondents in this study (21.8 %) had engaged in sexual intercourse with a person in an authority position in sport.

Using a legal criterion to define sexual abuse, Leahy, Pretty, and Tenenbaum (2001, 2002) surveyed elite athletes in Australia. They found that, of those who reported experiencing 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 reported being sexually abused within the sports environment. These findings indicate that sport is not an unequivocally safe place for athletes, whether male or female. 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 male athletic status and risk of sexual victimization.

Access to data about sexual victimization 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 sex offense data 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 sexual victimization. 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 sexual victimization in all its manifestations.

Method

PARTICIPANTS

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 US undergraduate students, aged 18 or older, enrolled at universities or colleges offering at least a two-year degree program (N = 4,814). For the purposes of this analysis, only college students of traditional undergraduate age (aged 18-24) were included in the sample (N = 2,903). Women accounted for 58.7% (n = 1,704) of this sample; the remaining 41.3% (n = 1,199) 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 survey. Men were significantly more likely than women to be college athletes ($p \le .001$), 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 overrepresented in their age groups up to the age of 20 but thereafter were 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 ($p \le .001$), 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 US college students, the NCHRBS employed a two-stage cluster sample design. First, the nation was broken down into 2,919 primary sampling units (PSUs), consisting of public and private two- and four-year colleges and universities. Seventy-four two-year institutions and 74 four-year institutions were selected from 16 strata, formed on the basis of the relative percentage of black and Hispanic students in each.¹ The institutions were selected with probability proportional to the size of undergraduate enrolment. 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 selected colleges and universities. Black and Hispanic students were deliberately over-sampled. To correct for expected differential rates of student non-response and ineligibility, 72 students were chosen from each two-year institution and 56 from each four-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 = 4,814). As just mentioned, only young adult students (aged 18-24) are included in the present analysis (N = 2,903).

A weighting factor was applied to each student record to adjust for school and student non-response and the over-sampling of students of color. The sample was poststratified by race/ethnicity, sex, and institution type (two-year or four-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 that were 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 their lives been forced to have penetrative sexual intercourse against their will (i.e., forced). 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 sexual victimization 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.
- 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. Because the cross-sectional nature of the NCHRBS data prevents direct assessment of causality, this variable was included in order to control for the possibility of a selection effect. That is, if athletes and non-athletes report comparable rates of early forced intercourse but differ significantly in later victimization, we may at least tentatively rule out the possibility that survivors of unwanted sexual encounters are simply less likely to seek out opportunities for athletic participation.
- 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, because 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 non-athletes (= 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 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 sexual victimization 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

Athletes were significantly less likely than non-athletes to report ever having been forced to have sexual intercourse against their will ($p \le .001$), lending some support to the protection hypothesis (Table 1). Within each gender, athletes reported lower sexual victimization 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 sexual victimization than male athletes (2.9%), and female non-athletes (17.4%) more than four times more likely to experience sexual victimization than male and the sexual victimization 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 sexual victimization more generally, but it is certainly common to find females at significantly higher risk of sexual victimization than males (Pinheiro, 2006; Straus, 2004).

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 ($p \le .01$), 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).

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

	Non-athlete (<i>n</i> = 2,215)		Athlete (<i>n</i> = 646)		Total (<i>n</i> = 2,861)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
Female (<i>n</i> = 1682)	17.4	(253)	14.5	(39)	16.9	(292)
Male (<i>n</i> = 1179)	4.1	(29)	2.9	(9)	3.7	(38)
Total (<i>n</i> = 2861)	11.8	(282)	6.9	(48)	10.5	(330)

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

Missing: n = 42 (1.4%) Total: $p \le .001$ Female: ns Male: ns

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

	Non-athlete (<i>n</i> = 2,209)		Athlete (<i>n</i> = 644)		Total (<i>n</i> = 2,853)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
Female (<i>n</i> = 1677)	3.1	(50)	1.8	(5)	2.9	(55)
Male (<i>n</i> = 1176)	0.9	(8)	0.0	(0)	0.6	(8)
Total (<i>n</i> = 2853)	2.2	(58)	0.6	(5)	1.8	(63)

Missing: n = 50 (1.7%) Total: $p \le .01$ Female: ns Male: $p \le .1$

	Non-athlete (n = 2,210)		Athlete (<i>n</i> = 645)		Total (n = 2,855)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
Female (<i>n</i> = 1679)	4.3	(71)	3.6	(11)	4.2	(82)
Male (<i>n</i> = 1176)	1.9	(15)	1.6	(4)	1.8	(19)
Total (<i>n</i> = 2855)	3.3	(86)	2.3	(15)	3.0	(101)

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

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

a selection explanation for the later protection effect of sports. That is, if lower sexual victimization 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 sexual victimization rates between athletes and non-athletes should be acute.

Sexual victimization, as reported in the survey, appears to most commonly begin 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), although this is not statistically significant. Athletes and

	Female Non-athlete (n = 250)		Athlete (n = 39)		Male Non-athlete (n = 27)		Athlete (<i>n</i> = 8)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
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)

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

Missing: n = 7 (2.1%) Female: ns Male: ns

Table 5. First forced to have sexual intercourse at age 17+ (excluding those forced prior to age 17), by sex and athletic status

	Non-athlete (<i>n</i> = 2,053)		Athlete (<i>n</i> = 619)		Total (<i>n</i> = 2,672)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
Female (<i>n</i> = 1521)	9.0	(113)	7.3	(18)	8.7	(131)
Male (<i>n</i> = 1151)	1.3	(7)	0.9	(3)	1.2	(10)
Total (<i>n</i> = 2672)	5.6	(120)	3.0	(21)	4.9	(141)

Missing: n = 231 (8.0%) Total: $p \le .01$ Female: ns Male: ns

non-athletes did not differ significantly in age-related risk of sexual victimization. Among sexual victimization 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 or for either gender specifically (Table 4). From a simple calculation of frequency reports, the late high school and early college years appeared to be particularly risky for female students (peak risk around age 17-18), whereas male risk appeared to be greatest before puberty (age 5-12). However, these data need to be substantiated with statistical analyses before unequivocal conclusions can be drawn.

Table 5 excludes cases where respondents reported 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 overall were at less risk for an

	Non-athlete (<i>n</i> = 2,210)		Athlete (<i>n</i> = 644)		Total (<i>n</i> = 2,854)	
	%	(<i>n</i>)	%	(<i>n</i>)	%	(<i>n</i>)
Female (<i>n</i> = 1678)	9.7	(134)	7.3	(19)	9.3	(153)
Male (<i>n</i> = 1176)	1.6	(10)	0.8	(3)	1.4	(13)
Total (<i>n</i> = 2854)	6.3	(144)	3.0	(22)	5.5	(166)

Table 6. Forced to have sexual intercourse at age 17+, by sex and athletic status

Missing: n = 49 (1.7%) Total: $p \le .01$ Female: ns Male: ns

initial occurrence than those who did not ($p \le .01$). Possibly due to small sample artifact, this relationship was not significant when male athlete and female athletes are analyzed separately.

Table 6 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 repeated occurrence of forced sexual intercourse than were non-athletes ($p \le .01$).

DISCUSSION

This study set out to examine whether status as a college athlete affords a student any protection against sexual victimization. According to the data presented here, being a student athlete does appear to be associated with lower risk of sexual victimization during the college years. This could be because people who have been sexually victimized are less likely to go into collegiate sports or that college sports afford students some protection against sexual victimization. It could also be a combination of these things or a totally separate reason. It seems that the first explanation may apply for females, whereas for males the second may apply. 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 sexual victimization experienced and the status of the perpetrators (family, peer, or stranger), it is difficult to understand the variations in age-related risks. It is also possible that peer-generated sexual victimization (through date rape, acquaintance rape, hazing-related acts, or other sources) comprised a proportion of the sexual victimization 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 & Klein, 1997).

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 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 and became more nuanced (Hall, 1996; Hargreaves, 1994). According to these more recent theoretical reformulations, sport began to be viewed as both an arena of structural gender discrimination against women and a cultural vehicle for the expression of agency, resistance, and 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.

The results from this study of college athletic participation and reported sexual victimization point to a contradiction. We know that women athletes experience sexual victimization, 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 of such experiences. 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, highlighting a positive message about sports participation and reducing the risk of sexual victimization 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

The general limitations of research in this field are now reasonably well-documented (see 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, framing of questions, response rates and underreporting, validity and reliability of measures, and 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, variables, 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. Other studies have focused on national/international level athletes and have found risk of sexual harassment to be higher in elite level performers. Whether this is also the case for sexual victimization, we cannot say.

Sport type. Because the NCHRBS asked only about generic college sports team participation, no cross-sport analysis could be conducted. This omission was regrettable

because an analysis of sport differences would have been especially helpful in testing Brackenridge and Kirby's (1997) hypothesis about the Stage of Imminent Achievement, which suggests that peak vulnerability for sexual victimization occurs just before the peak age for a given sport.

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

Duration of the sexual victimization. The NCHRBS coding system adopted could not reveal whether multiple instances of sexual victimization 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 any protective effect of athletic participation.

Socio-economic status. The victims' socio-economic background may well condition the psychological, social, and financial resources upon which they may draw in order to cope with sexual victimization.

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

Because the number of prevalence studies of sexual victimization 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 non-athletes as the control group. No non-student controls are/were available for the US.

Obviously, the less often instances of sexual victimization 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 analyses controlling for a range of potentially confounding factors, such as race, ethnicity, and socioeconomic status. Clearly, there is a need to gather 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 because it is known that attrition rates (drop off between allegation and conviction) are very high indeed (Kelly, Lovett, & Regan, 2005).

CONCLUSION

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 associated with or mediated through athletic participation, notably the 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., 2000). The findings both point to the need for further strongly designed research, with explicit definitions, that can be replicated to improve reliability. It also suggests the

need for theoretical work to interrogate and problematize concepts like "resilience" and "protection" in the context of sport. Only then might some of the claims for the personal and psychological benefits of sport be substantiated.

Endnote

¹The terms "Black," "Hispanic," "students of color," and so on as ethnic categories are neither universally adopted nor necessarily deemed acceptable. However, because this article is based on a secondary analysis, we were not in a position to challenge or amend such labels. In the event, there were insufficient data to break down sexual victimization responses by ethnicity.

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