

Sexual harassment and eating disorders in female elite athletes
- a controlled study

Jorunn Sundgot-Borgen¹, Kari Fasting¹, Celia Brackenridge², Monica Klungland Torstveit¹
and Bo Berglund³

¹Norwegian University of Sport and Physical Education, OSLO, Norway, ²Cheltenham and
Gloucester College of Higher Education,
GLOUCESTERSHIRE, UK,

³Division of Medicine, Karolinska Hospital, STOCKHOLM, Sweden

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Correspondence: Jorunn Sundgot-Borgen, PhD, Norwegian University of Sport and Physical
Education, Box 4014, Ullevål Stadion, 0806 OSLO, Norway.

Tel: Int-47-23 26 2335, Fax: Int-47-22 23 4220, E-mail:jorunn@nih.no.

Abstract

The aims were to examine the percentage of female elite athletes and controls reporting sexual harassment and abuse (SHAB), and whether a higher percentage of female athletes with eating disorders (ED) had experienced SHAB. A questionnaire was administered to the total population of female elite athletes (n=660) and controls (n=780) aged 15-39 years. SHAB were measured through 11 questions, ranging from light to severe SHAB. In addition, questions about dietary-, menstrual- and training history and the Eating Disorder Inventory were included. The response rate was 88% for athletes and 71% for controls. Athletes (n=121) and controls (n=81) classified as “at risk” for ED and non-ED controls participated in a clinical interview. A higher percentage of controls, compared with athletes reported experiences of SHAB in general (59% vs. 51%, $p<0.001$). A lower percentage of athletes had experienced SHAB in sports than outside sport (28% vs.39%, $p<0.001$). A higher percentage of ED athletes than non-ED athletes had experienced SHAB (66% vs.48%) ($p<0.01$), both inside sport and outside sport. In spite of the fact that a higher percentage of controls compared with athletes had experienced SHAB, it is necessary to formulate clear guidelines, set up educational workshops and implement intervention programs for both ED and SHAB in sport.

Key words: Disordered eating, sexual harassment and sport

Introduction

Research on sexual harassment and sexual abuse (SHAB) in sport began in the mid-1980s (Tomlison & Yorganci, 1997). Although there is a growing public awareness of the problem of SHAB in sport, empirical studies of this topic are still scarce (Brackenridge, 1997; Fasting & Brackenridge, in press; Kriby, Greaves & Hankivsky, 2000; Leahy, 2001; Toftegaard, 2001).

Therefore, knowledge about the extent and types of violations of personal and sexual safety in sports is needed.

The question of whether SHAB is more common in elite sports than in society as a whole is, as yet, unresolved. Most research concerning SHAB has taken place in the workplace and in the educational system (Stockdale, 1996). However, given the long-term close contact between individuals in some sports, both physically and psychologically inappropriate behavior may occur (Donnelly, 1999). In many sports there is a lot of “hands-on” instruction. For example, in the sports of gymnastics there might be a close physical contact between athletes and between athletes and coaches during instruction and practice. Thus, touching the athlete is, in some sports, part of the sporting experience. However, this also creates possibilities for inappropriate touching. This potential is intensified by the physical, technical and social power that coaches may have over athletes (Brackenridge & Kirby, 1997; Lenskyj, 1992). However, empirical studies have not yet found any link between touching and risk of SHAB. Other factors, such as the nature of the coach-athlete relationship (highly intense), the performance level of the athlete (just before peak level) and the power of the coach (completely dominant), seem to be more effective predictors of risk (Brackenridge & Kirby, 1997).

There is no generally accepted definition of SHAB in sports. Some authors distinguish between sexual harassment and abuse, while others include abuse under the concept of sexual harassment. Brackenridge (1997) attempts to resolve this difficult definitional problem by suggesting that there is a continuum from sex discrimination to sexual harassment to abuse. She defines sexual harassment as “unwanted attention on the basis of sex” (such as lewd comments, pinching, touching or caressing, sexual looks, etc.) and sexual abuse as “groomed or coerced collaboration in sexual and/or genital acts where the victim has been entrapped by the perpetrator”. For the purposes of this study, the definitions of SHAB given by Brackenridge (1997) were used. Even though SHAB may be defined objectively, it

is important to recognize that it is experienced subjectively. Thus, the personal and psychological impact of the same behavior may be perceived differently between individuals (Brackenridge & Kirby, 1997).

Summarizing four Canadian studies with relatively small sample sizes McGregor (1998) suggests a prevalence of SHAB of 40-50% of female sport participants with harassment types ranging from mild sexual harassment to severe abuse. SHAB by a coach was experienced by 25% of Danish male and female sport students and younger female athletes with older coaches seem to be at increased risk of SHAB (Toftegaard, 2001). In a study of the total population of Canada's high performance and recently retired Olympic athletes, Kirby, Greaves and Hankivsky (2000) found SHAB by authority figures in sport were widespread practices. 22% replied that they had had sexual intercourse with persons in positions of authority in sport. 8.6% reported they had experienced forced sexual intercourse, or rape with such persons. Using a screening questionnaire of 2118 Australian athletes Leahy (2001) found that 31% of the female and 21% of the male athletes reported experiencing sexual abuse at some time in their lives. Of these 41% of females had been sexually abused within the sport environment.

A number of studies have shown that ED symptoms or clinical ED are more common among athletes than non-athletes (Sundgot-Borgen, 1994; Smolak, Murnen, Ruble, 2000). Some ED elite athletes reported a history of SHAB during the consultation related to the ED, and some athletes claimed that SHAB had played a significant role in the development of the ED (Sundgot-Borgen, 1993; Sundgot-Borgen, 1994). Sexual abuse has been reported in 30% to 65% of ED non-athletes (Zerbe, 1992; Connors & Morse, 1993). A history of childhood sexual abuse has been considered as one of the risk factors for the development of ED (Walsh, Wheat, Freud, 2000) and Johnson (1994) reports a link between anorexia nervosa (AN) and bulimia nervosa (BN) and sexual victimization. Whether there is some specific association between sexual abuse and ED is not clear (Pope & Hudson, 1992; Connors & Morse, 1993; Deep, Lilienfeld, Plotnicov, Pollice, Kaye, 1999).

Studies on prevalence of SHAB and ED in athletes have often suffered from the same methodological weaknesses, such as: small sample size, no clear definition of ED or SHAB, lack of control groups,

and very low response rates (Tomlison & Yorganci 1997; Smolak et al. 2000). No studies have compared the prevalence of SHAB in elite athletes and controls, or studied ED athletes reporting experiences of SHAB. Therefore, the present study was designed to determine the prevalence of elite female athletes and controls reporting SHAB, and also to examine whether the prevalence of SHAB is higher among elite athletes meeting the diagnostic criteria for ED when compared with non-ED athletes.

Material and methods

The study comprised 660 female athletes, the total population of elite female athletes (58 sports/events) in the Norwegian national senior and junior teams organized by the Norwegian Olympic Committee and Confederation of Sports (NOCCS).

The athletes were sent a battery of assessment questionnaires. Each Sport Federation received detailed written information about the procedure and aims of the study. An elite athlete was defined as one who qualified for the National Team at junior or senior level, or as a member of a recruiting squad for those teams. Athletes had to be 15-39 years, train at least eight hours per week and fill out the questionnaire completely. Exclusion criteria were: intention to stop training or stop competing within the next six months, participation in two different sports, non-healthy athletes under medical treatment, and planned or ongoing pregnancy. 46 athletes out of the initial 660 athletes did not respond for unknown reasons. In addition, 34 athletes did not meet the inclusion criteria and 27 did not fill in the questionnaire completely. Thus, complete responses were obtained from 553 athletes. When athletes who did not meet the inclusion criteria were excluded, the response rate of the total sample of female elite athletes was 88% (553/626).

A random sample of the general female population (n=780) was matched to the athletes' age group (15-39 years), and was obtained through the Norwegian Population Register. 166 controls did not respond for unknown reasons. In addition 56 controls did not meet the inclusion criteria and 42 controls did not fill in the questionnaire completely. Complete responses were obtained from 516

controls. When controls who did not meet the inclusion criteria were excluded, the response rate for the total female control sample was 71% (516/724).

This two-stage study included a screening stage by questionnaire, and a clinical interview. In addition to questions concerning the experience of SHAB, the Eating Disorder Inventory (EDI) (Garner, Olmsted, Polivy, 1983), questions also assessing body weight history, physical training history, dietary history, nutritional habits, the use of pathogenic weight control methods, injury history and menstrual history were included. The main outcome of the questionnaire data was self-reports of SHAB experiences and “at risk” data for ED. The experiences of SHAB were measured through 11 questions derived and adapted from Brackenridge (1997). These measured experiences of sexual harassment ranging from light sexual harassment such as "repeated unwanted sexual remarks concerning one's body, private life, sexual orientation etc." to severe sexual abuse defined as "attempted rape or rape". The respondents were asked to mark for each of the 11 questions whether or not they had experienced the behavior, and whether it had been perpetrated by a man or a woman. The athletes were also asked to mark if they had experienced it from an authority figure in sport, from peers in sport, or from someone outside sport. Corresponding categories for the controls were: from a supervisor at work or a teacher at a school, from fellow workers or students, or from someone outside these settings. Since experiences of SHAB were measured relatively roughly, and because the study might suffer from underreporting, results are presented by comparing the experiences of SHAB between the two samples and between athletes and controls and different subgroups among the athletes. The results reported are therefore based on a threshold measure, not a quantity or severity measure; that is, any reported experience of SHAB was counted, regardless of type or frequency. It was further not registered at which age the experience(s) of SHAB had taken place. “Experiences of SHAB” therefore means that a subject had marked one or more forms of SHAB on the 11-item scale. Furthermore, no attempt was made to control for exposure time, that is the time during which a girl/women can be considered “at risk” for SHAB.

In the second phase of the study, subjects classified as being “at risk” for ED by the questionnaire, 121 athletes and 81 controls, were identified by a positive response to one of the following selection criteria; 1) answering ‘yes’ or ‘I don’t know’ on one or both of the following two questions; a) do you have an ED? b) have you ever had an ED?, 2) gaining a high score on sub-tests of the EDI, and 3) giving two or more positive answers to questions related to the criteria for ED listed in the Diagnostic and Statistical Manual (DSM-IV) (APA 1994). The clinical interview was performed by someone specially trained in ED in order to find out how many of the “at risk” athletes and “at risk” controls met the DSM-IV criteria (1) for anorexia nervosa (AN), bulimia nervosa (BN) and Eating Disorder Not Otherwise Specified (EDNOS) or the criteria for anorexia athletica (AA) (Sundgot-Borgen, 1994; Smolak et al. 2000). Subjects meeting the criteria for AN, BN, EDNOS or AA were defined as eating disordered (ED) subjects.

All subjects participating in the study had to complete a consent form. Written parental consent was required from those under the age of 18. Permission to undertake the study was provided by the NOC, the Data Supervising Bureau and the Regional Committee for Medical Research Ethics in Oslo. No attempt was made to follow up non-respondents during the study.

All analyses were performed using SPSS software (SPSS, Evanston, IL). Contingency tables were used to test for association between categorical variables. All tests were two tailed. Stepwise logistic regression analysis was used to determine how the dependent variable (SHAB) changed as a function of the independent variables: age, menarcheal age, Body Dissatisfaction (BD), Drive for Thinness (DT), Body Mass Index (BMI), ED and sport group (leanness sports vs. sports focusing less on leanness). $P < 0.05$ was considered statistically significant. Results are presented as the mean and SD or percentages unless otherwise noted. Frequency distribution on age among athletes was divided equally in the following age groups; 15-18 years, 19-22 years and 23-39 years.

Results

Controls were significantly older than athletes 24.6 (± 6.5) years vs (21.4 (± 4.6) years ($p < 0.01$).

A higher percentage of controls (59%) compared with athletes (51%) reported experiencing SHAB

($p < 0.001$). No significant difference in percentage of experiencing SHAB was observed between age groups either among the athletes or the controls (*Figure 1*). However, a significantly higher percentage of controls representing the two oldest age groups, compared with athletes representing the same age groups ($p < 0.01$), had experienced SHAB, *Figure 1*.

A similar prevalence of controls (47%) and athletes (45%) had experienced SHAB from males, but a significantly higher prevalence of controls (21%) compared with athletes (15%) had experienced this from women ($p < 0.05$) (*Figure 2*).

A lower prevalence of athletes ($n = 156$, 28%) had experienced SHAB and abuse in sport (from authority figures in sport and/or from other athletes) compared with athletes ($n = 218$, 39%) who had experienced SHAB from others outside the sports community ($p < 0.001$) (*Fig. 3*). A significantly higher percentage of controls (51%) had experienced SHAB from outside school/work compared with athletes (39%) who had experienced SHAB from *outside sport* ($p < 0.001$) (*Fig. 2*).

More athletes had experienced SHAB from other athletes ($n = 104$, 19%) compared with the athletes who had experienced SHAB from authority figures ($n = 80$, 15%) ($p < 0.01$). A significantly higher percentage of athletes ($n = 80$, 15%) had experienced SHAB from an authority figure in sport compared with the percentage of controls ($n = 46$, 9%), who had experienced SHAB from a supervisor or boss at work or from a teacher at school ($p < 0.05$). Of the 156 athletes who had experienced SHAB from within their sport, 28 athletes had done so from both athletes and authority figures.

A significantly higher percentage of athletes ($n = 113$, 20%) compared with controls ($n = 56$, 9%) ($p < 0.01$) met the DSM-IV criteria for ED. A higher percentage of ED athletes (66%) compared with non-ED athletes (48%) reported the experience of SHAB, ($p < 0.01$). Also, a higher percentage of ED athletes compared with non-ED athletes had experienced SHAB from individuals in the sport community, from individuals outside the sport community, from an authority figure and other athletes (*Table 1*). When the number of athletes diagnosed with an ED who also reported experience of SHAB were compared (AN, $n = 5$, AA, $n = 16$, BN, $n = 19$ and EDNOS, $n = 28$) no significant difference between

the diagnostic groups was observed.

With all the independent variables in the multiple regression analysis performed on the athletes (ED, sport groups, DT, BD, BMI and menarcheal age), ED was the only significant association found when SHAB was the dependent variable ($p=0.027$). No significant association for controls was observed when the same variables except for sport-group were included in the regression model.

Discussion

The main findings of this study are as follows: a significantly lower percentage of athletes compared with controls had experienced SHAB in general. Also, a lower percentage of athletes had experienced SHAB outside sports when compared with controls' equivalent experiences outside school/work.

There was no difference between athletes and controls in percentage of SHAB from men, 15% and 21% of athletes and controls, respectively, were harassed by women. SHAB from other athletes was more common than SHAB from authority figures in sports. A significantly higher percentage of athletes had experienced SHAB from authority figures inside sport when compared with the percentage of controls who had experienced SHAB from authority figures at school or work. A significantly higher percentage of ED athletes, as compared with non ED athletes, reported the experience of SHAB both inside and outside the sport community. Further analysis showed an association between SHAB and ED in athletes.

Considering the sensitive themes included in the questionnaire a response rate of 88% and 71% for athletes and controls respectively is good. Non-respondents, however, were not followed up, so it is possible that they comprise a subgroup with an over-representation of SHAB or ED. Underreporting is common in connection with such sensitive topics (Sundgot-Borgen 1993; Brackenridge, 1997; Smolak et al. 2000). An attempt was made to prevent underreporting by the inclusion of the following sentence in the information letter following the questionnaire; "If you report a problem or experiences related to ED and/or SHAB, professional guidance/counseling will be offered".

Another important question is whether there is more underreporting among the athletes than among

the controls. With respect to memory and suppression there is no reason to believe that there are differences between the two groups. However, the affinity to, and dependence on the NOC and the Sports Federations are strong for the athletes, thus potentially increasing the risk of underreporting. On the other hand, SHAB is measured relatively crudely here, from milder forms of sexual harassment (SH) through to sexual assault and abuse. By using this broad definition it is possibly easier for subjects to report milder forms of SH than more severe sexual abuse. In this case the prevalence of experiences might not necessarily be underreported, but the severity of the SHAB experienced might be. This will however not affect our results since we are presenting the experiences of SHAB as a threshold measure. It is important to emphasize that SHAB was a threshold measure and not a measure of amount or frequency.

In contrast to Donnelly's study (1999), that showed the experience of SHAB to be more common in athletes than controls, the present study shows that female elite athletes, as a group, do not report experiencing SHAB more often than female non-athletes. In addition elite athletes usually have very little time outside sports so this in itself could protect them from exposure to SHAB by outsiders. One factor that could contribute to the higher prevalence observed among the controls is the higher number of controls in the oldest age groups and, therefore, higher risk for exposure to SHAB for a longer period of time. Clinical experience indicates that some women do not admit to SHAB until they are somewhat more mature. Therefore, it is a limitation with this study that the response rate is not the same in all the age groups. In this case some of the women who have experienced SHAB might not have answered the questionnaire on account of feeling shame or being too sensitive. However, the age factor alone cannot explain the difference in prevalence since significant differences in prevalence of SHAB experience was found between athletes and controls in two out of the three age-groups. Apart from the framework of sports governing bodies, the sport subculture includes authority figures in sport such as coaches, health care personnel, trainers, leaders, administrators as well as other athletes. No difference was observed between the percentage of athletes who had experienced SHAB in a sport setting compared with that experienced by controls at work or school. More athletes had experienced SHAB from an authority figure in sport than controls had done from supervisors or

teachers. Authority figures in sport usually have closer and more prolonged contact with female elite athletes thus have more opportunity for inappropriate behavior. There may also be an unequal power relationship between an athlete and an authority figure like a coach. Risk situations for SHAB appear to be international and national tournaments, massage by an authority figure, and spending time in the authority figure's home or car (Brackenridge & Kirby 1997).

Even though female elite athletes experience more SHAB outside than inside sports a lower percentage reported the experience of SHAB outside sport (39%) than the controls (51%). This observation might indicate that values and benefits obtained within the sports community in Norway as a whole in Norway have a protective effect against SHAB in general, or even in society at large. This finding lends support to the view that sport builds the capacity for resistance and resilience among female elite athletes.

The reason for this protection can only be speculated on but one explanation might be the increased self-esteem, the physical strength and assertiveness found in high level female athletes (Cramer, Nieman, Lee, 1991; Biddle, 1995). Whether this proposed high self-esteem has been acquired during the athlete's sport participation, or high self-esteem is a selection criterion for sport participation at high level, is unknown (Cramer et al. 1991).

The finding that men are the most common gender harassing female athletes supports previous work addressing SHAB (Tomlinson & Yorganci 1997). Findings on SHAB perpetrated by women against both female elite athletes have, to our knowledge, not been published previously. The reason for females harassing females can only be speculated on. It could be that also some women in society at large are adopting the lifestyle of men, i.e. a male pattern of dominance. This will of course affect women in sport, and perhaps particularly female coaches. Hall has noted (1997) that, although often seen as an issue of male vs. girls and women, it is important that SHAB between female coaches and female athletes is also discussed.

Almost two thirds (104/156, 67%) of the harassed female elite athletes had experienced SHAB from other athletes compared with 51% (80/156) from authority figures in sport.

It could be argued that the imbalance of power in athlete to athlete relationships provides the vehicle for one athlete to sexually harass another.

Risk situations for SHAB between athletes and coaches seem to be international and national tournaments (Cense & Brackenridge, 2001). Since the athletes in this study often compete nationally and internationally they would appear to be at a higher risk when compared with lower status athletes.

In contrast to findings from the controls, a higher percentage of ED athletes compared with non-ED athletes reported experience of SHAB, perpetrated both by other athletes, and authority figures in sport and from individuals outside the sport community. In this study, regression analysis revealed that ED was associated with SHAB in athletes, but no such association was observed in controls. ED patients are hypersensitive and have difficulties in setting limits. One might speculate that the fact that a higher percentage of ED athletes than non-ED athletes reported SHAB could be explained by the hypothesis that athletes with low self esteem, who are pressured to reduce weight due to certain unwritten roles in their sport, develop an ED and are then more vulnerable to experiencing (objectively and or subjectively) SHAB than are non-ED athletes. Also, the fact that SHAB occurred in 48% and 66% of non-ED and ED athletes, respectively, may lend support to the hypothesis that SHAB could be a consequence of ED in athletes. Shisslak and Crago (1992) suggest that it is important to remember that imposing verbal abuse and extreme dieting techniques can result in extensive physical and emotional damage to adolescent females since coaches occupy important positions of influence and power over girls/females in sport. The fact that a higher percentage of ED athletes had experienced SHAB most probably reflects the underlying personality that characterizes the disease. However, it could also be argued that these ED athletes have developed ED due to the experience of SHAB inside or outside sports. Earlier results suggest that about 4% of ED athletes reported SHAB as a reason for the development of ED (Sundgot-Borgen, 1994). However, there were no questions on time sequence. Therefore, it is not possible to argue causality from our data. The intention of this study was not to examine the cause and effect of ED and SHAB, but to examine a possible association. Indeed, cause-

effect linkages could not be examined in this study since no family-based data were collected. It is therefore not known whether the athletes had an ED prior to the reported experience of SHAB. Therefore, the question of whether SHAB determines the development of an ED in athletes remains unclear. In one study on non-athletes (Deep et al. 1999), SHAB occurred prior to the onset of an ED in the majority of subjects. It has also been suggested that SHAB is more common in BN patients than in AN patients in the general population. In this study no significant difference in the prevalence of ED athletes who reported the experience of SHAB was found between the diagnostic groups. Despite the volume of data collected on the relationship between sexual abuse and ED, no conclusive findings have been established in the general population (Deep et al. 1999). However, the association found in this study between SHAB and ED in athletes underlines the need for further research and for information about this to be given to coaches and health care personnel. The possible causality between ED and experienced SHAB is however, a question for further research.

Perspective

Even though the present study demonstrates that fewer female elite athletes than controls reported experiences of SHAB, within the sports community compared with their non-athlete counterparts in the wider society, it is still important to continue work against SHAB in sport. Thus, athletes diagnosed with ED should probably be considered “at risk” for experiencing or having experienced SHAB. Similarly, athletes reporting SHAB should be asked questions related to ED during clinical evaluation. Appropriate treatment approaches and follow ups for the athletes should be arranged. In order to guarantee a safe environment for sport participants it is necessary to continue preventative work on ED, to formulate clear guidelines, to set up educational workshops and to implement intervention programs for both ED and SHAB.

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Tables

Table 1. Percentage of experienced sexual harassment and abuse in eating disordered and non-eating disordered athletes.

	ED athletes	Non-ED athletes	P-value
	%	%	
Experienced sexual harassment and abuse (SHAB)	66	48	0.01
From inside sports	34	26	0.05
From authority figures in sport	32	8	0.05
From other athletes	26	17	0.05
From outside sport	54	34	0.05

The total percentage of ED and non-ED athletes who reported the experience of SHAB is 66% and 48%, respectively. However, athletes have reported the experience from different categories (from inside and outside sports).

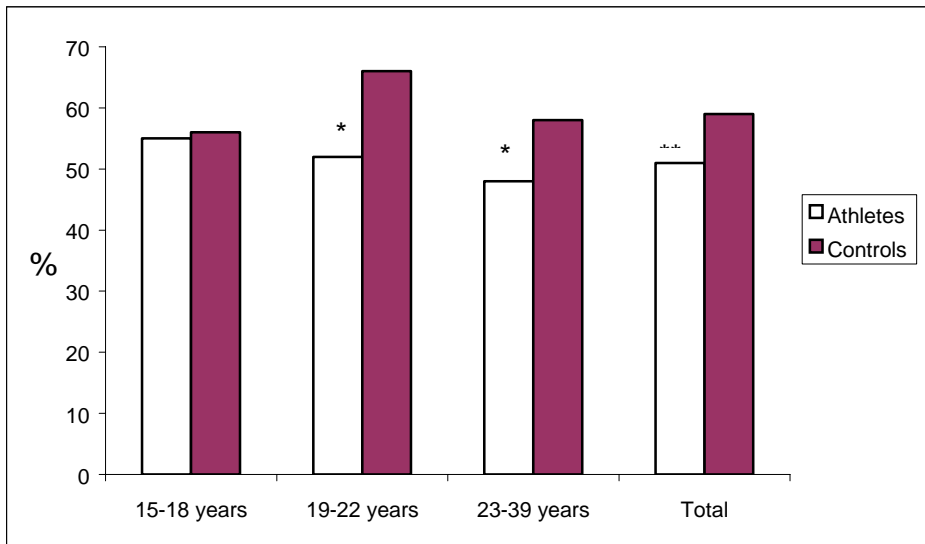


Figure 1

* $p < 0.05$ between athletes and controls

** $p < 0.01$ between athletes and controls

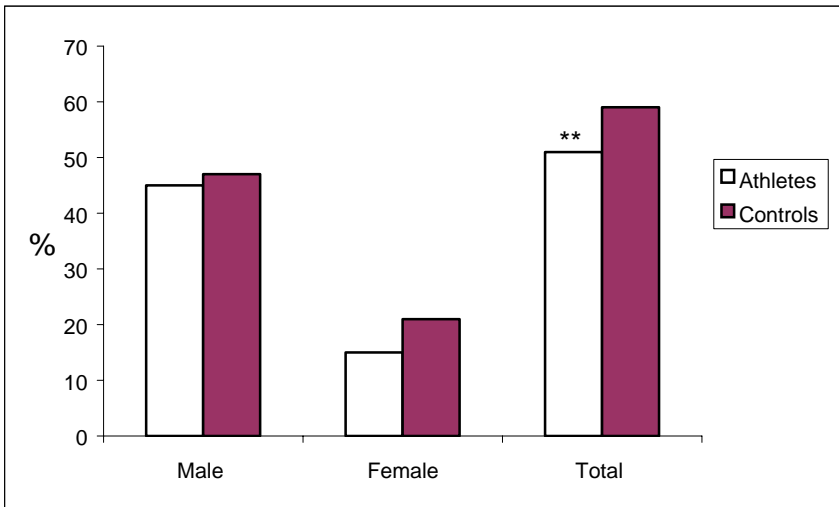


Figure 2.

* $p < 0.05$ between athletes and controls

** $p < 0.01$ between athletes and controls

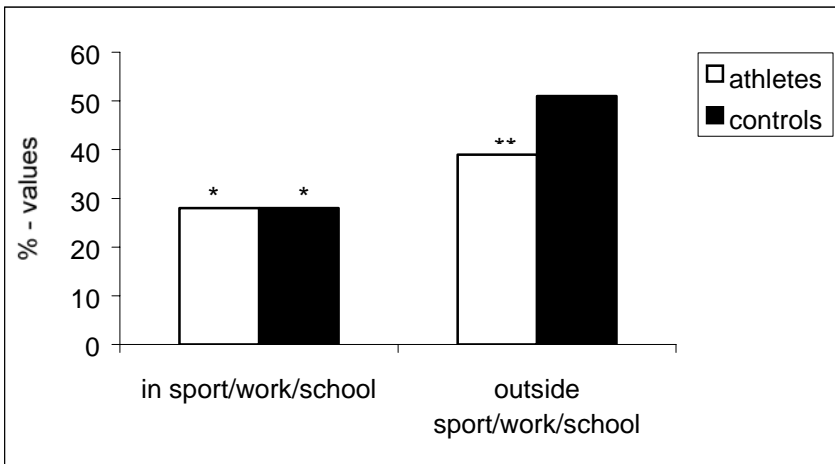


Figure 3

* $p < 0.001$ between athletes in- and outside sport and between controls in and outside work/school

** $p < 0.001$ between athletes and controls outside sport and outside work/school

Figure legends

Fig. 1. Percentage of female elite athletes and controls in different age groups who had experienced sexual harassment and abuse.

Fig. 2. Percentage of female elite athletes and controls who had experienced SHAB from one or more persons.

Fig. 3. Percentage of female elite athletes and controls who had experienced SHAB in sport/work or school and outside sport/work or school.