

ASSOCIATIONS BETWEEN ACADEMIC PERFORMANCE OF DIVISION 1 COLLEGE ATHLETES AND THEIR PERCEPTIONS OF THE EFFECTS OF ANABOLIC STEROIDS

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Abstract:

Data on the relationship between academic performance (grade point average) of college athletes and their perceptions of the effects of anabolic steroids on their sport and their performance were collected from Division 1 athletes ($N=1,638$) representing 12 varsity sports chosen from five universities nationwide. The response rate was 74%. Analysis yielded differences between athletes with high and low GPAs in perceptions of the effects of anabolic steroids. The lower the GPA, the less likely the athletes were to believe that anabolic steroids are a threat to health, are a problem in their sport, and are addictive. Also, they were more likely to believe that anabolic steroids enhance performance.

Article:

The use of drugs to enhance physical performance predates the ancient Greek Olympiads. Throughout sports history, athletes have used a variety of drugs as ergogenic aids. These have included alcohol, cocaine, ether, strychnine, and anabolic-androgenic steroids. Anabolic steroids are synthetic derivatives of the male sex hormone testosterone. Under certain conditions these drugs can significantly increase lean muscle mass and strength as well as enhance the capacity to train. Based on anecdotes and testimonials as well as the results of systematic surveys using self-reports, a dramatic increase in the incidence of the use of anabolic steroids by athletes is thought to have taken place over the last four decades (Frankle, Cicero, & Payne, 1984; Wang, Downey, Perko, & Yesalis, 1993). During the 1980s a number of studies on the use of anabolic steroids by adolescents were conducted and showed that among high school seniors, 5 to 12% of boys and 1 to 2% of girls reported having used these drugs (Buckley, Yesalis, Friedl, Anderson, Streit, & Wright, 1988; Johnson, Jay, Shoup, & Rickert, 1984). Somewhat less is known about the extent of anabolic steroid use among collegiate athletes, and even less is known about their perceived effects of these drugs. This study examined the relationship between the academic performance of college athletes, their self-reported grade point average, and their opinions about the effects of anabolic steroids on their sport and their performance.

Method

Five NCAA Division 1 institutions volunteered to participate during the 1989-90 academic year. The institutions were identified based on a series of consistent criteria. Each institution sponsored a broad-based athletic program for men and women students in at least 17 sports. Each of the participating institutions identified an individual (a team physician or certified athletic trainer) who had agreed to be the onsite investigator. The number of participating athletes was 1,638 (1,115 men, 523 women). Representative sports were gymnastics, basketball, cross-country/track, lacrosse, football, baseball, swimming and diving, volleyball, wrestling, and others for men, and gymnastics, basketball, cross-country/track, tennis, field hockey, softball, swimming and diving, volleyball, lacrosse, and others for women.

The survey used a 46-item questionnaire of four items regarding respondents' perceptions of steroids' effects on health. Analysis included cross-tabulations and chi squared. Contingency tables were used to present the results. Chi squared was used to test the associations between the athletes' GPA and their perceptions of effects of anabolic steroids.

Results

Table 1 presents numbers and percents of athletes by GPAs for the four questions on perceived effects of anabolic steroids. The relationship between athletes' beliefs that anabolic steroids are a significant threat to health and their GPA was not significant ($p = .06$). However, it appeared that athletes with higher GPAs tended to believe that steroids are a serious threat to health. A significant association was found between GPA and the belief that anabolic steroids are a problem in the sport ($\chi^2=33, p < .001$). The percent responding suggest that the lower the GPA, the more likely the athletes were to perceive anabolic steroids to be a problem. The belief that anabolic steroids enhance performance was significantly related to the GPA ($\chi^2=26, p < .01$). The lower the GPA, the more likely athletes were to believe that anabolic steroids could enhance performance in their sport. As Table 1 also shows, athletes with lower GPAs were less likely to believe in the addictive properties of anabolic steroids ($p < .01$). Athletes with higher GPAs tended to believe that anabolic steroids were addictive psychologically or physically ($\chi^2=20, p < .001$).

These findings imply that, although efforts have been made to educate athletes about the inherent dangers of anabolic steroid use, the athletes most at risk for using anabolic steroids tend to be those with the lower academic performance. This points to the appropriateness of educational interventions targeting this group. One such method that would not single out athletes with lower GPAs would be the inclusion of education about anabolic steroids in the campus offerings on drug education. This could include any drug awareness or personal health courses, both of which are popular classes. This effort would also include student athletes with low and high GPAs, who responded on the survey that they "didn't know" about the effects of anabolic steroids.

TABLE 1
PERCENTAGES AND FREQUENCIES OF ATHLETES' PERCEPTIONS OF
ANABOLIC STEROID EFFECTS BY GRADE POINT AVERAGE*

Perceived Effects	Grade Point Average					
	3.0-4.0		2.0-2.99		1.0-1.99	
	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>
1. Anabolic steroids are a significant threat to health.						
Definitely yes	62.0	427	55.9	496	47.4	18
Probably yes	26.4	182	28.7	255	44.7	17
Don't know	9.1	63	11.1	28	5.3	2
Probably no	1.6	11	3.2	28	2.6	1
Definitely no	.9	6	1.1	10	0.0	0
2. Anabolic steroids are a severe problem in your sport.						
Very great problem	5.8	40	8.1	73	7.9	3
A problem	12.1	84	20.4	184	28.9	11
A small problem	21.4	149	18.9	170	10.5	4
Not a problem	39.7	276	35.2	317	23.7	9
Don't know	21.0	146	17.1	156	28.9	11
3. Anabolic steroids enhance performance in your sport.						
Greatly enhance	21.9	152	29.3	264	52.6	20
Somewhat enhance	45.0	312	39.9	359	23.7	9
Have no impact	11.5	80	12.1	109	5.3	2
Don't know	21.5	149	18.7	168	18.4	7
4. Anabolic steroids are addictive, psychologically or physically.						
Definitely yes	35.7	247	30.8	274	23.7	9
Probably yes	40.7	281	39.0	347	31.6	12
Don't know	19.1	132	23.9	213	31.6	12
Probably no	3.9	27	4.7	42	7.9	3
Definitely no	0.6	4	1.6	14	5.3	2

*Sample sizes may not add up to 1,638 because values are missing.

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