



Original article

Self-Perceived Weight and Anabolic Steroid Misuse Among US Adolescent Boys

Jonathan D. Jampel^a, Stuart B. Murray, Ph.D.^b, Scott Griffiths^c, and Aaron J. Blashill, Ph.D.^{d,e,*}^a Behavioral Science Team, The Fenway Institute, Boston, Massachusetts^b Department of Psychiatry, University of California, San Francisco, San Francisco, California^c School of Psychology, University of Sydney, Sydney, New South Wales, Australia^d Department of Psychology, San Diego State University, San Diego, California^e Department of Psychology, SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, California

Article history: Received August 3, 2015; Accepted October 8, 2015

Keywords: Anabolic steroids; Adolescent boys; Body image; Weight

See Related Editorial p. 379

A B S T R A C T

Purpose: Anabolic steroid misuse is a growing concern among adolescent boys, and chronic misuse is associated with multisystemic health consequences. However, little is known about weight related predictors of anabolic steroid misuse. We examined the prediction of lifetime anabolic steroid misuse as a function of self-perceived weight status among US adolescent boys.

Methods: Analysis was undertaken using the 2013 Youth Risk Behavior Survey, a nationally representative data set sampling public and private high school students throughout the United States. Data from a total of 6,000 US adolescent boys were used in the present study.

Results: The prevalence of ever misusing anabolic androgenic steroids was 12.6% among boys who viewed themselves as very underweight, 11.9% for boys who viewed themselves as very overweight, compared with 3.8% for boys who viewed themselves as about the right weight. Compared to boys who viewed themselves as about the right weight, boys who self-perceived themselves as very underweight (adjusted odds ratio = 6.9, 95% confidence interval: 2.7–17.7, $p < .001$) and very overweight (adjusted odds ratio = 3.8, 95% confidence interval: 1.8–7.7, $p < .001$) were significantly associated with increased risk of anabolic androgenic steroid misuse.

Conclusions: Large effect size estimates were revealed, suggesting that anabolic androgenic steroid misuse is not solely a function of boys desiring increased mass; boys who desire leanness are also likely to misuse anabolic androgenic steroids. Future prevention efforts should target not only boys who view themselves as underweight but also those who perceive themselves as overweight.

© 2016 Society for Adolescent Health and Medicine. All rights reserved.

IMPLICATIONS AND
CONTRIBUTION

This study examines the role of both underweight and overweight self-perceptions in predicting anabolic androgenic steroid use among adolescent boys. The findings suggest that steroid prevention efforts should examine extreme distortions in self-perceived weight—both very underweight and very overweight.

Androgenic anabolic steroids (AAS) refer to a family of hormones and synthetic derivatives, inclusive of testosterone, that facilitate muscle development and fat loss [1,2]. Evidence linking

AAS to adverse health outcomes is rapidly accumulating [3]. AAS appear to have a particularly deleterious effect on cardiovascular functioning, including greater cardiac mass [4], abnormal contraction and dilation of the heart, reduced peak systolic strain [5], and atherosclerosis [6]. Evidence is also mounting that AAS misuse has long-term adverse effects on the neuroendocrine system [2]. AAS misuse has been implicated in the etiology and maintenance of muscle dysmorphia [7] and forms the basis for a

Conflicts of Interest: No authors of this study have any conflicts of interest, including relevant financial interests, activities, relationships, or affiliations.

* Address correspondence to: Aaron J. Blashill, Ph.D., Department of Psychology, San Diego State University, 6363 Alvarado Court, Suite 103, San Diego, CA 92120.

E-mail address: aaron.blashill@sdsu.edu (A.J. Blashill).

recently proposed psychiatric condition called androgen dependence syndrome, in which sufferers use AAS despite prominent adverse medical, psychological, and social effects [8]. Other adverse psychiatric effects, including aggression, violence, and hypomania, have also been documented, although recent studies to substantiate these effects are lacking [2]. In addition, AAS sold over the Internet or on the street are often fake, contaminated, or counterfeit, potentially exposing the purchaser to dangerous substances [9]. Although adolescents may constitute a minority of AAS users [10], they also are a particularly important group to study given that they biologically may be more vulnerable to the effects of AAS, due to their still developing brain and body [11].

Published prevalence rates of AAS misuse are highly variable, particularly among adolescents. Data from longitudinal studies indicate a lifetime prevalence rate of 1.7% among adolescent boys living in the United States [12]. The prevalence of lifetime steroid use among Australian adolescents was recently reported to be 2.4% [13]. Cross-sectional research from a large sample of American college students found a prevalence rate of 1% [14]. However, a recent nationally representative study of US adolescents found lifetime misuse prevalence at 7% in 2013, up from 5% in 2012 [15]. To date, it is unclear what is accounting for the variation in prevalence rates between studies, although it is possible that it is due to unclear operationalization of what constitutes AAS versus other appearance and performance enhancing drugs. In addition, adolescents may confuse illegal anabolic steroids with legal nonanabolic steroids. Corticosteroids, for example, are widely prescribed for a range of physical conditions and may potentially lead to overestimates of AAS use. Despite the lack of clarity around an established prevalence rate of AAS misuse, even the most conservative figures are comparable to the rate of anorexia nervosa among adolescent females.

Body dissatisfaction is a robust risk factor for AAS misuse among adolescent boys [16–18]. The current Western “ideal” form for the male body emphasizes both leanness and muscularity [18], with empirical evidence illustrating a curvilinear relationship between body weight and body satisfaction, in that greatest body dissatisfaction occurs in males with both low and high body mass index (BMI) [19]. Given that AAS misuse is often used as a means to approach this often highly unattainable body [20,21], it stands to reason that boys who perceive their bodies as distal from this ideal, whether in regard to body fat, muscle mass, or both, may experience greater body dissatisfaction and thus be at greater risk for AAS misuse. In partial support of this, a recent study of approximately 8,000 adolescent high school boys living in the United States found that perceiving oneself as very underweight was significantly predictive of AAS misuse [22].

However, boys who perceive themselves as overweight may also be at risk for AAS misuse. It is important to note that some forms of AAS are used primarily for purposes of achieving leanness versus excessive muscle mass. For instance, one increasingly used synthetic agent—clenbuterol—is used specifically for its fat burning properties [23]. Thus, adolescent boys who perceive themselves as overweight may also be at risk for misusing AAS—perhaps for reasons similar to those of boys who perceive themselves as underweight—to achieve a highly lean and muscular body. The notion that there exist various groups of boys at risk for misusing AAS—underweight boys and overweight boys—is supported by research. Hildebrandt et al. [24] modeled heterogeneity among a sample of 400 regular AAS users and found evidence for distinct classes—including those who used predominantly fat

burning substances to effect a reduction in body fat and body weight and those who used predominantly anabolic or muscle building substances to effect an increase in muscle mass and body weight. However, to date, no known studies have simultaneously examined the role of perceived underweight and overweight status in predicting AAS misuse among adolescent boys. With this limitation in mind, we hypothesized that boys who perceive themselves as distal to the ideal male body—that is, both underweight and overweight males—would be more likely than their average weight peers to engage in AAS misuse.

Methods

Participants and procedure

The present study is a secondary data analysis from the publicly available 2013 National Youth Risk Behavior Survey (YRBS) [25,26]. For the purposes of the present study, we examined select variables (described in the following section) from the YRBS, based on the present study hypotheses. The YRBS is a nationally representative survey that monitors the health behaviors among US high school students and used a 3-stage cluster sample design that yielded a representative sample of ninth through 12th grade students. Students included all public, catholic, and other private school students enrolled in grades nine through 12. Student participation in the study was voluntary and anonymous. In 2013, the survey included 92 items, and the Institutional Review Board of the Centers for Disease Control and Prevention approved the national YRBS. A total of 13,583 students responded to the survey (88% return rate), from 148 schools (77% return rate). For the purposes of the present study, only participants who indicated their sex was male were included ($N = 6,000$; see Table 1 for sample characteristics) given the sex disparities noted in the prevalence of AAS misuse. Additional information regarding the methodology and validity of the YRBS is discussed in detail elsewhere [25].

Measures

AAS misuse. Lifetime AAS misuse was assessed with the following item, “During your life, how many times have you taken steroid pills or shots without a doctor’s prescription?” The response options for this item were: 0 times, 1 or 2 times, 3–9 times, 10–19 times, 20–39 times, or 40 or more times. To denote any lifetime misuse, a dichotomous score was created by coding no use as “0” and all other responses as “1.” Two additional dichotomous variables were created to assess moderate and

Table 1
Sample characteristics

Variable	M (SD)/N (%)
Age	16 (1.2)
Grade level	
9th Grade	1,819 (26)
10th Grade	1,606 (23)
11th Grade	1,671 (24)
12th Grade	1,798 (26)
Race/Ethnicity	
White	2,844 (48)
Nonwhite	3,050 (52)
Hispanic/Latino	1,744 (26)
Non-Hispanic/Latino	5,065 (74)

M = mean; SD = standard deviation.

Download English Version:

<https://daneshyari.com/en/article/1078195>

Download Persian Version:

<https://daneshyari.com/article/1078195>

[Daneshyari.com](https://daneshyari.com)