Narcissism and Empathy in Steroid Users

John H. Porcerelli, Ph.D., and Bruce A. Sandler, D.O.

Objective: In an effort to begin to construct a psychological profile of anabolic steroid users, the authors compared weight lifters and bodybuilders who did or did not use anabolic steroids on an objective measure of narcissism and on clinical ratings of empathy. Method: The subjects were 16 weight lifters and bodybuilders who reported that they had used anabolic steroids within the past year and a comparison group of 20 weight lifters who had not used steroids. The Narcissistic Personality Inventory and clinical ratings of empathy were used to assess narcissism. Results: Steroid users had significantly higher scores on dimensions of pathological narcissism and significantly lower scores on clinical ratings of empathy. Conclusions: These preliminary results document a relationship between anabolic steroid use and narcissistic personality traits. They also indicate the need for further research to determine whether narcissistic personality traits contribute to the initiation of anabolic steroid use or result from their use.

(Am J Psychiatry 1995; 152:1672-1674)

The nonmedical use of anabolic steroids has been identified as a potentially important health problem in the United States (1, 2). A substantial body of evidence links anabolic steroid use to a variety of psychiatric symptoms in adults. These symptoms include irritability, aggressiveness, euphoria, grandiosity, hyperactivity, and recklessness (3, 4). To our knowledge, there is only one placebo-controlled prospective study of psychiatric symptoms associated with steroid use: Su et al. (5) reported psychiatric symptoms in normal subjects following experimental trials of anabolic steroids.

Yesalis et al. (6) have stressed the need for a psychological profile of anabolic steroid users to better understand the processes involved in initiating and maintaining anabolic steroid use. Although reality factors (e.g., a high school athlete needing to gain muscle mass to play at the collegiate level) and social factors (e.g., wanting to build an exceptional physique) can provide motivation for anabolic steroid use, gaining size, strength, and confidence and dramatically improving one's appearance may serve important psychological (narcissistic) needs.

The concept of pathological narcissism put forth by Kohut (7) and Kernberg (8), broadly defined as the inability to maintain good feelings about the self (self-esteem), may prove useful in shedding light on the dynamics of anabolic steroid use. A body of clinical and empirical evidence resulted in the inclusion of the diagnosis of narcissistic personality disorder in DSM-III in 1980. Diagnostic criteria for the disorder include a grandiose sense of self-importance; preoccupation with fantasies of omnipotence and omniscience; susceptibility to feelings of rage, shame, humiliation, and emptiness; a sense of entitlement; exploitativeness; and a lack of empathy.

In an effort to begin to construct a psychological profile of anabolic steroid users, we compared weight lifters and bodybuilders who did or did not use anabolic steroids on an objective measure of narcissism (9-11) and on clinical ratings of empathy derived from projective test data chosen to elicit narcissistic personality traits. We hypothesized that anabolic steroid users would have higher scores for narcissism and lower scores for empathy than a comparison group of subjects who did not use anabolic steroids.

METHOD

The subjects were 36 male weight lifters and bodybuilders from three gyms in a large Midwestern city. The anabolic steroid user group comprised 16 subjects who reported having used steroids at some point during the past year. (Because of the lack of willingness of anabolic steroid users to participate in research studies, subjects were not asked to report current anabolic steroid use.) Twenty weight lifters who reported never having used steroids served as the comparison group. All of the subjects had been weight lifting continuously for at least 1 year at a frequency of at least three workouts per week.

The men who used steroids did not differ significantly from those who did not in age, racial and ethnic background, or number of years of weight lifting. The mean age of the 36 subjects was 30.9 years (SD=7.0). Twenty-eight (78%) were Caucasian, four (11%) were African American, three (8%) were Middle Eastern, and one (3%) was Hispanic. They had been weight lifting for a mean of 11.9 years.
RESULTS

There were significant group differences for the Narcissistic Personality Inventory factors and empathy according to multivariate analysis of variance ($F=2.87$, df=8, 27, $p<0.02$). Univariate F tests were then calculated for each dependent variable. As shown in table 1, three Narcissistic Personality Inventory factors (exhibitionism, entitlement, and exploitativeness) and empathy were statistically significant and in the hypothesized direction. High to moderate effect sizes were obtained on these four variables.

DISCUSSION

Results of this preliminary investigation support the hypothesis that bodybuilders and weight lifters who used anabolic steroids would have higher narcissism and lower empathy scores than a comparison group of weight lifters who did not use anabolic steroids. Higher exhibitionism, entitlement, and exploitativeness scores on the Narcissistic Personality Inventory further suggest that the weight lifters who used anabolic steroids evidenced what Raskin and Terry (11) designated as more maladaptive and pathological aspects of narcissism.

One limitation of this study was our reliance on self-report of steroid use. One could argue that increases in pathological narcissism scores and lower empathy ratings are by-products of the commonly reported (3–6) manic symptoms that result from anabolic steroid use and are not enduring traits of individuals who initiate steroid use. That is, narcissistic features such as grandiosity, exhibitionism, and exploitativeness are simply common aspects of mania. Lower empathy scores could also be interpreted as the result of steroid-induced aggression and irritability. A question remains, however, as to whether athletes who use anabolic steroids and have narcissistic traits had these traits before they began to use anabolic steroids.

Since the capacity to empathize includes a cognitive component, an alternative explanation for group differences in empathy may be differences in education (i.e., level of intelligence). Although the subjects in the comparison group were, on the average, more highly educated than the subjects who used steroids, this explanation is unlikely given that the average level of education for the subjects who used steroids was approximately 2½ years of college.

Research (15) using the Diagnostic Interview for Narcissistic Patients (16) has raised questions about the validity of lack of empathy as a criterion of pathological narcissism. Although pathological narcissism was not assessed by using a structured interview, results from this study suggest that empathy ratings from projective test data may prove clinically useful in discriminating narcissistic personality from other disorders.

A major limitation of this study involves the attrition rate for the anabolic steroid users. The majority of the subjects who withdrew from the study did so during the administration of the Narcissistic Personality Inventory. Questions on this measure blatantly tap narcissistic themes (e.g., “I like to look at myself in the mirror,” “I like to be the center of attention”), which may have threatened the self-esteem of some subjects who were using anabolic steroids. A possible interven-

---

**TABLE 1. Average Narcissistic Personality Inventory Factor Scores and Empathy Ratings for Weight Lifters and Bodybuilders Who Did or Did Not Use Anabolic Steroids**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Used Steroids (N=16)</th>
<th>Did Not Use Steroids (N=20)</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Exhibition</td>
<td>5.50</td>
<td>2.39</td>
<td>4.60</td>
</tr>
<tr>
<td>Superiority</td>
<td>3.00</td>
<td>2.16</td>
<td>1.40</td>
</tr>
<tr>
<td>Entitlement</td>
<td>2.50</td>
<td>1.15</td>
<td>2.25</td>
</tr>
<tr>
<td>Exploitativeness</td>
<td>2.31</td>
<td>1.70</td>
<td>1.25</td>
</tr>
<tr>
<td>Self-sufficiency</td>
<td>2.63</td>
<td>1.63</td>
<td>1.55</td>
</tr>
<tr>
<td>Vanity</td>
<td>3.31</td>
<td>1.62</td>
<td>2.53</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.12</td>
<td>1.63</td>
<td>4.75</td>
</tr>
</tbody>
</table>

*p<0.05. **p<0.01.
ing variable accounting for the attrition rate of the anabolic steroid users is the degree of irritability and aggression associated with anabolic steroid use (3–6). Thus, the combination of drug-induced irritability and aggression and blunt Narcissistic Personality Inventory questions may have weakened narcissistic defenses that serve to bind painful affects, feelings of dependency, and painful memories (8).

Given the difficulty in conducting prospective research on subjects who begin to use anabolic steroids at some future time, future research could focus on assessing narcissistic personality traits in subjects who have used steroids but are not currently using them. Research comparing the psychological profiles of anabolic steroid users and users of other illegal substances is also needed to determine whether these results simply reflect differences between people who do or do not use illegal substances.

REFERENCES