

Depression Associated with Anabolic Steroid Abuse (AAS) in People Visiting Gyms and Health Clubs

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ABSTRACT:

Background: Anabolic steroids are used mostly by bodybuilders, athletes, and fitness buffs, who say the steroids provide them with a competitive edge and/or enhance the physical performance bodybuilders have. Believing anabolic steroids improve competitiveness and performance, uninformed or deluded athletes, sometimes encouraged by coaches or parents, misuse the drugs in order to gain lean body mass, increase aggression, and gain weight. Objectives: To know the nature and extent of depression associated with anabolic steroid abuse in people visiting gyms and health clubs. Materials and Methods: This was a cross sectional study consisting of 114 participants who are the gym going population of local gymnasiums in Delhi NCR. Tools: Following psychiatric rating scales will be used for collection of data: Semi-Structured Proforma For Socio-Demographic Data, the Zung Self Rating Depression Scale. Results: It was observed that there was a significant difference in between the younger and older age groups more participants belonging to age group >30 years were found to have moderate to severe dependence. Also, significantly more participants who were AAS dependent also suffered more from depressive disorders as compared to non-user/ non – dependent users. Conclusion: It was observed that those who were AAS dependent suffered more from depressive disorders as compared to non-user/ non – dependent users.

Keywords: Depression, Anabolic steroid abuse, athletes.

INTRODUCTION:

Why People Misuse Anabolic Steroids Anabolic steroids can be used as a performance-enhancing medicine, increasing lean body mass and decreasing body fat, while also producing a variety of undesirable effects (Kaplan and Sadock, 1988). If used this way, they can lead to severe side effects and addiction. They may be used by determined individuals to

justify anabolic steroid use, even though there is evidence these drugs cause permanent physical damage and significant side effects (Kaplan and Sadock, 1988).

Many individuals using anabolic steroids are aware of the risks of taking them, and they believe they can avoid the side effects by taking the drugs a certain way. Anabolic steroids are used mostly by bodybuilders, athletes, and fitness buffs, who say the steroids provide them with a competitive edge and/or enhance the physical performance bodybuilders have (Kanayama et al., 2009). Believing anabolic steroids improve competitiveness and performance, uninformed or deluded athletes, sometimes encouraged by coaches or parents, misuse the drugs in order to gain lean body mass, increase aggression, and gain weight. Conclusions: The prevalence of anabolic steroid use has increased over the last decade in many high-income countries, and it may result in aggressiveness, depression, mania, and psychosis, as well as a number of physical complications (Yates et al., 1999). There is a relationship between the use of anabolic-androgenic steroids and reduced psychological well-being later in life (Bahrke et al., 1992). While the withdrawal symptoms of steroids are uncomfortable, the risks of serious harm or death when ceasing use/abuse of anabolic steroids are minimal. Untreated, it is known that certain depressive symptoms associated with the withdrawal of anabolic steroids can continue to occur a year or more after an abuser stops taking the drug (Pope and Katz, 1988). Depressive symptoms are common in the course of steroid withdrawal, and use of antidepressants is indicated when symptoms persist and fit criteria for severe depression (Buckley et al., 1988).

Depression during steroid withdrawal is thought to affect only about 10% of users, but it may still be severe enough to lead to suicide. The higher anabolic/androgenic steroids dose used over longer periods of time, the worse estrogen rebound effects may occur. When an external supply of steroids is depleted, particularly suddenly and after prolonged use, testosterone production does not restart instantly. The body of the steroid user becomes used to having a higher testosterone levels (Bahrke et al., 1996).

Steroid use causes unnatural increases in testosterone levels, which, in turn, decreases the body's ability to make testosterone naturally. From a public health perspective, the most troubling of these substances are anabolic-androgenic steroids (AAS) -- the family of hormones including testosterone and its synthetic derivative, testosterone. Currently, we are focusing on power athletes specifically using anabolic-androgenic steroids (AAS), a subcategory of IPD, because of the relative prevalence of use of anabolic-androgenic steroids (AAS) across the spectrum of IPD used by male power athletes (20). Because of the potential for severe adverse effects and a high potential for abuse, anabolic steroids are classified in the United States as Schedule III controlled substances (Ip et al., 2012). Doses taken by abusers may be up to 10 to 100 times higher than those used to treat a medical condition (Kashkin and Kleber, 1989).

MATERIALS AND METHODS:

This was a cross sectional study, the sample included the gym going population of local gymnasiums in Delhi NCR. Gym going population of local gymnasiums in Delhi NCR.

METHODOLOGY:

Ethical clearance was obtained from the Institute's Ethical committee. Permission was obtained from the Gymnasium Coordinators. All the participants were provided with written and informed consent proforma to be signed by them. Those participants who gave their consent were included in the study. Participants were given instructions for filling the semi-structured proforma and other psychiatric rating scales. Chi square test and t-test was applied for comparisons.

Following psychiatric rating scales will be used for collection of data: -

1. Semi-Structured Proforma For Socio-Demographic Data
2. The Zung Self Rating Depression Scale

Semi-Structured Proforma

Semi structured proforma was made to collect socio-demographic details like name, age, gender, year of education, residential background, family and personal history of psychiatric illnesses, etc.

The Zung Self Rating Depression Scale

The Zung Self-Rating Depression Scale is a 20-item self-report questionnaire that is widely used as a screening tool, covering affective, psychological and somatic symptoms associated with depression. The questionnaire takes about 10 minutes to complete, and items are framed in terms of positive and negative statements. It can be effectively used in a variety of settings, including primary care, psychiatric, drug trials and various research situations. Each item is scored on a Likert scale ranging from 1 to 4. A total score is derived by summing the individual item scores, and ranges from 20 to 80. Most people with depression score between 50 and 69, while a score of 70 and above indicates severe depression. The scores provide indicative ranges for depression severity that can be useful for clinical and research purposes. The Zung scale also provides a simple tool for monitoring changes in depression severity over time in research study.

RESULTS:

Table 1: Distribution of Participants on the Basis of Zung Self Rating Depression Scale

Zung Self Rating Depression Scale Scores	Percentage
1) 20-44	64.91%
2) 45-59	32.46%
3) 60-69	2.63%
Total	100.00%

In this table, participants with low scores on Zung self rating depression scale showed more dependence on anabolic steroid use.

DISCUSSION:

The study comprised 114 people in total who provided written, informed consent and met the inclusion and exclusion criteria. In our study, more people in the over-30 age group (34.38%) were found to have moderate to severe dependence, which was statistically significant when compared to 15.84% of those in the 18 to 30 age group. These results were consistent with data from Kaplan and Saddock's comprehensive textbook of psychiatry, which shows that dependence develops after the median age of onset, which is around 23 years in both the USA and other countries (Zung, 1965). In their study titled "Anabolic-androgenic steroid dependence: an emerging disorder" at USA, also reported findings that were similar to these (Kanayama et al., 2009). We did not discover any appreciable differences in anabolic steroid use between the age groups, nevertheless. However, we discovered that younger participants—those between the ages of 18 and 30—used AAS at higher rates (64.71%) than older participants (35.29%). This finding is consistent with statistics from Kaplan and Saddock's comprehensive textbook of psychiatry, which shows that the median age of initiation of AAS usage is roughly 23 years old and that only 5.9% of users started using AAS before the age of 17. Likewise, Buckley W. E. et al 1988 study in Pennsylvania, USA, titled "Estimated prevalence of anabolic steroid usage among male high school seniors," found no appreciable variation in AAS use between age groups (Buckley et al., 1988).

In terms of anabolic androgenic steroid use, we discovered that there was a statistically significant difference between the use of anabolic androgenic drugs by male and female participants. This result is consistent with data from Kaplan and Saddock, who suggested that the true rate of AAS usage in girls may be as low as 0.1% in their thorough textbook of psychiatry. 11 Additionally, we discovered that individuals from the upper middle socioeconomic class (37.84%) had greater moderate to severe reliance than participants from the upper socioeconomic class (12.99%) in our study.

These results indicate that considerably more AAS dependent subjects had various psychiatric co-morbidities than non-users or non-dependent users. Similarly, in their research paper (Kashkin and Kleber, 1989) and HG Pope Jr. et al. observed that AAS dependent people were more likely to have mental co-morbidities in their study (Pope and Katz, 1988). In contrast to our study, Yates WR et al. found no significant difference in mood disturbance in their studies on the psychosexual effects of three doses of testosterone cycling in normal men and on psychological moods and subjectively perceived behavioural and physical changes associated with anabolic-androgenic steroid use.

In this study, we discovered that participants with AAS dependence had considerably higher positive scores on the Zung Self-Rating Depression Scale²⁰ (66.67%) compared to non-users or non-dependent users, who had significantly lower positive scores (26.67%). Additionally, we discovered that people taking AAS scored substantially higher on the Zung Self-Rating Depression Scale (61.67%) than non-users, who only achieved a score of 23.75%.

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SUMMARY AND CONCLUSION:

About one hundred and fourteen participants who frequented various health clubs and gyms in Delhi NCR participated in this study. Participants were assessed using the Zung Self-Rating Depression Scale in this cross-sectional study. The younger and older age groups were shown to differ significantly, with more participants older than 30 years being reported to have moderate to severe dependence. It was discovered that individuals who were men used anabolic androgenic drugs more frequently than participants who were women, which was

statistically significant ($p < 0.05$). These results indicate that considerably more AAS dependent subjects had various psychiatric co-morbidities than non-users or non-dependent users. Additionally, considerably more AAS dependent patients experienced depressive disorders than non-users or non-dependent users.

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