

KNOWLEDGE, AWARENESS AND PRACTICES OF HARMFUL EFFECTS OF ANABOLIC STEROIDS AMONG BODY BUILDERS IN RAWALPINDI AND ISLAMABAD

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ABSTRACT

Objective: To determine the knowledge, awareness and practices of anabolic steroids amongst body builders of Rawalpindi and Islamabad.

Study Design: Cross sectional study.

Place and Duration of Study: The study was conducted in various gyms and fitness centres in Rawalpindi and Islamabad from November 2013 to May 2014.

Material and Methods: A structured close ended questionnaire was filled from the body builders in various gyms/fitness centres after taking informed consent. A total of 310 male body builders between age group of 15-35 years were interviewed by non-probability convenience sampling technique. Standard descriptive and analytical statistics were used to analyze the data. Data analysis was done including variables like age, education, legality, motivation, workout, side effects and withdrawal symptoms of steroids. Chi-square test was used to ascertain the association between categorical variables, 95% confidence intervals (95% CI) and *p* value less than 0.05 was considered significant.

Results: A total of 310 male adolescents were surveyed, 64% reported past or present use of anabolic steroids. Mean (SD) age of the body builders was 24.7 (+ 3) years and most (84%) of them were educated. More than 72% of all the body builders had the knowledge that the steroids are harmful for their health. About the side effects of steroid use, 37% knew about hair loss, acne 21%, aggression/hypertension 14%, and sterility/infertility 15%. Bodybuilders who were aware that steroid use is illegal was 62% but still they were using them (*p* <0.001). The withdrawal symptoms of steroids were not known to 64% bodybuilders (*p* < 0.001). Trainers and friends seemed to be the main motivational forces (*p* <0.008). Bodybuilders taking steroids were satisfied using them (*p* < 0.000). It was interesting to note that the bodybuilders who were themselves hooked onto steroids were not willing to recommend others to use them (*p* < 0.000). Mood swings were seen in majority (61%) of bodybuilders. About 17% of the non-users of steroids were planning to start it in future. Steroids in the injectable form were used by 83% of the bodybuilders.

Conclusion: Use of steroids in bodybuilders is rising and a large number of body builders are using anabolic steroids without proper knowledge of the adverse effects and withdrawal symptoms of steroids. People being aware that steroids are illegal, continue using them. Trainers, peer pressure are main motivators for steroid use. Most of the body builders who are taking steroids seem pleased with its effect on the body. In addition, our study showed that there were unregulated sources of steroids in Rawalpindi and Islamabad from where the majority of the participants can have easy access. Media and health care professionals can play a vital role in the dissemination of knowledge.

Keywords: Anabolic steroids, Attitude, Knowledge, Physical activity, Practices.

INTRODUCTION

Everyone desires to live a healthy life which requires effort. Physical activity especially playing sports is considered a healthy hobby. The relationship between drugs and sports has always engaged scientific

community, and a lot of research has been done to describe the pattern of drug abuse in athletes¹. It is a general concept that people who are into sports prefer a healthy lifestyle and refrain from drug use^{1,2}. However, the prevalence of drug abuse among athletes acts as a stimulus for the researchers to find out the reasons of drug usage³. The trend for the use of illicit drugs in the athletes is on the rise^{3,4}. For enhancing the performance, athletes are using these illegal drugs, going against the doping regulations^{4,5}.

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Believing that it is imperative to have a physically powerful body to be successful at body building anabolic steroids (AS) are widely used by body-builders to gain muscle size and strength^{4,6}. Body builders go for the easy way out by indulging in steroid use. The use of steroids, only if combined with proper training and diet can help increase muscular size^{3,5,6}. Medical professionals consider this use of steroids unjustified as the adverse effects exceed the benefits⁶. In sports like body building where size and strength are the main objectives of the bodybuilders, they disregard this advice of the health professionals⁷.

Recent research suggests that bodybuilding is one of the fastest growing trends in health and physical fitness. Men seem to be spending a lot of time and energy on bodybuilding as they consider it to be a part of a healthy and exercise-focused lifestyle^{7,10}. Studies show that steroid use is common in middle class men of age group 25-35 years^{7,8}. Idealizing the renowned body builders and with the desire to get a body like the professional body-builders, young generation follows the theory 'the bigger the better' and do not care how they achieve it at the cost of their health^{5,7}. It is becoming a trend even in nonprofessional and non-competitor body builders to use steroids so that they can increase their body mass. A study done in 2006 showed that 78% of the non-competitors are using steroids, 13% of these bodybuilders reported unsafe injection practices (needle-sharing) while using steroids^{6,9}.

Unfortunately it is extremely difficult to determine the percentage of AS used and the level of awareness of its adverse effects among the body builders of Pakistan as there is no data available. The purpose of the present study is to assess the awareness of the body builders about anabolic steroid use in this region and obtain information about their knowledge of these drugs, withdrawal symptoms, harmful effects and factors motivating them for its use.

SUBJECTS AND METHODS

This cross sectional study was conducted in different gyms & fitness centers located

within Rawalpindi and Islamabad from November 2013 to May 2014.

The target population included body builders coming to the gyms and fitness centers of Rawalpindi and Islamabad. The gyms were selected by non-probability convenience sampling technique. The gyms whose owners did not allow us to get the questionnaire filled by their body builders were excluded. Sample size of 310 male body-builders between the age group of 15-35 years coming to the gyms regularly and who were willing to participate were selected through non-probability convenience sampling technique. The sample size was calculated by WHO sample size calculator. The calculated sample size was 275 body-builders with an expected knowledge and awareness of steroid of 50%. However a total number of 310 eligible bodybuilders participated in the study. The pre-tested structured questionnaire was self-administered; response rate was very encouraging of 96%. Informed consent was taken from all the participants and confidentiality of data was assured.

This structured questionnaire includes participants' social and demographic characteristics, other variables like reason for starting body building, time spent in the gym, reasons and duration of using steroids, perceptions of the physiological effects of steroids, and familiarity with the complications associated with steroid use. The data had been analyzed in SPSS 18. Chi-square test was used to ascertain the association between qualitative variables, *p* value less than 0.05 was considered significant.

RESULTS

Among the 310 male adolescents surveyed, 198 (64%) reported past or present use of AS. When the mode of administration of these steroids was questioned, it was found that majority (83%) were using injectable steroids for this purpose. Their awareness level was checked if they considered drug use legal or not, 123 (62%) of them had the knowledge that it is illegal.

In assessing the knowledge regarding possible physiological effects of steroids, 103 (52%) of the users acknowledged an increase in muscle mass (or size) and an increase in strength as possible effects. More than 72% of all the body builders had the knowledge that the steroids are harmful for their health. In assessing understanding of some well-known side effects of steroid use, few body builders were aware of the hazards of AS use on their health such as hair loss 37 %, acne 21 %, aggression/hypertension 14%, and sterility/infertility 15% and the rest had no idea about the side effects. Mood swings were seen in majority (61%) of bodybuilders. In order of priority, according to the steroid users the four most popular sources of information and motivational forces concerning steroids were trainers (52%) , friends (26%), internet/media (13%) and the so-called "muscle" magazines, and newspapers (8%). Trainer and friends are the main motivational forces and majority (62%) of them did not even know the withdrawal symptoms these results.

They start their gym between 15-25 years while majority (83%) start using steroids between 20-30 years. Body builders taking steroids, at present were satisfied (81%) and happy with the effects on their body which according to them is the gain in muscle mass and strength. About 62% of the steroid users despite knowing it is illegal were still using them. The use of supplements in the non-steroid users is 43 %. Majority (56%) thought that the benefits of using AS outweighed their harms. Most of the participants (59%) were not in the favor of telling the health authorities about the using AS. Also, agreement regarding not punishing AS sellers correlated positively with level of education ($p < 0.012$). It was alarming though that the bodybuilders who were using steroids themselves were not willing to recommend others about its use ($p < 0.000$). It was also noted that (24%) body builders who did not use steroids themselves did not see any harm in its use and were not afraid of suggesting it to others.

The main sources of getting these AS along with its administration were trainers (72%),

followed by friends (24%) and online shopping (4%). Of great concern was that 17% of the non-users of AS were planning to start it in future while 21% were not yet sure about this. Almost all AS users (94%) had been taking nutritional supplements for body building purposes. There was no marked difference seen for the work out done and the time spent in the gym when the body builders were not using AS and when they started it ($p < 0.001$).

DISCUSSION

Like all other countries, in Pakistan too, a large number of body builders are falling victims to the culture of supplements in the race to push their body to the limit. Most of the bodybuilders in Pakistan are between the age group of 20-35 years (90%)¹¹. It is seen in the study that these young boys start body building usually between the age of 15-25 years and the use of supplements or steroids is after they cross 20 years. Most body builders start with different supplements and end up taking steroids, without realizing the harm they are producing in their bodies. It is seen that more than 79% of the body builders in our sample are taking both, supplements and steroids. The use of supplements in the non-steroid users is also high. Body builders believe that taking both will enhance their body mass rapidly^{11,12}.

This study shows that more than half (55%) of the bodybuilders had heard that the anabolic steroids use is illegal but unfortunately the reasons why it is considered illicit is not known by a lot of people. It is a matter of concern that 16% of the gym users were not even aware if steroid use is legal or not and 20% said their use is not unlawful. This shows that majority know that its use is illegal but they are not apprehensive about using banned drugs. Only few body builders admitted that steroids are prohibited and hence should be refrained from^{13,14}.

Fifty two percent seemed to know that steroids increase metabolism and helps in increasing the muscle size and strength but were ignorant of their side effects. Similar results about the lack of knowledge of the health hazards of AS were seen in a study done by Omer et al in 2008 in United Arab Emirates¹⁵.

Like the study by Omer et al¹⁵ the satisfaction level of the body builders using steroids is alarmingly high. This stage of denial is more dangerous than not knowing the effects because their own health is at stake.

Studies show that the educated young individuals use gyms for better fitness and regular means of exercise to tone their body as compared to the uneducated individuals whose sole drive to use gyms is body building¹⁶. Some studies show that education plays an important role in the use of steroids. Uneducated people are inclined more towards steroid use since they are unaware of its side effects^{14,15}. In our study however, the results did not match with other studies. Our study shows that boys going to the gyms in Pakistan are mostly educated. This could be because this sport is expensive and not everyone can afford to join the gym. It could be because the educated class is more health conscious as compared to the uneducated class.

Steroids are easily available either from the pharmacy shops or from the trainers. This shows that the illegal drugs are easily available in Pakistan. Studies done in Iran and UAE also show that the steroid availability is not an issue^{14,15, 18}.

Studies show that the trainers in the gyms play a vital role in initiating AS to bodybuilders^{15,17}. Mostly the gym owners are the trainers as well. Their objective is to get popularity at the cost of body builders. Most of the bodybuilders going to the gyms are being advised/recommended steroid use by the trainers (52%). Even the body builders who are reluctant to use steroids are asked to do so by the trainers. Most of the body builders get it from the trainers (72%), who provide them with the steroids at a much higher rate^{17,18}. The steroids administered to the body builders is mostly in the injectable form (83%). The body builders buy them from the trainers to avoid the hassle of going to the shop to get them¹⁹.

CONCLUSION

This study shows that the use of steroids in bodybuilders is soaring and a large number of body builders are using anabolic steroids without proper knowledge of the adverse effects of steroids. Misuse of steroid was

significantly higher among those with high level of education. Most of the people being aware that steroids are illegal, continue using them. Most of the people are unaware of withdrawal symptoms after they quit steroids. Trainers, peer pressure are main motivators for steroid use. In addition, our study showed that there were unregulated sources of AS in Rawalpindi and Islamabad from where the majority of the participants can have easy access.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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