



## Knowledge and attitude regarding steroid usage among gym users

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### Abstract

In recent years, the growing emphasis on fitness and bodybuilding has led to an increase in gym attendance across India. While regular exercise promotes overall health and well-being, there is a rising concern regarding the misuse of anabolic-androgenic steroids (AAS) among gym users. This descriptive study aimed to assess the knowledge and attitudes regarding steroid usage among gym users in Coimbatore. A non-experimental descriptive research design was employed, and data were collected from 60 gym users through a structured questionnaire. Participants were selected using a non-probability convenience sampling technique. The questionnaire included demographic details, knowledge assessment, and attitudes measured using a Likert scale. Data were analyzed using descriptive and inferential statistics. The findings revealed that the majority of participants were male (83.3%), aged between 20-30 years (63.3%), and undergraduate students (80%). More than half (55%) had an average level of knowledge about steroids, while 45% had good knowledge, and none had poor knowledge. Attitude assessment showed that 66.7% had a positive attitude towards steroid usage, while 33.3% exhibited a neutral stance. A weak positive correlation ( $r = 0.165$ ) between knowledge and attitude was observed. A significant association was found between the type of exercise performed and the level of knowledge regarding steroids (Chi-square = 6.711,  $df = 2$ ,  $p < 0.05$ ). The study concluded that gym users had moderate-to-good knowledge, and most of the gym users had a positive attitude towards steroid use, indicating the need for targeted awareness programs. The study highlights the role of nurses in educating gym users about the risks of steroids, integrating substance abuse topics into nursing education, and implementing evidence-based awareness programs.

**Keywords:** Anabolic steroids, gym users, knowledge, attitude, nursing intervention

### Introduction

Health is a dynamic concept that encompasses physical, mental, and social well-being, rather than merely the absence of disease. Maintaining good health involves preventive measures, healthy lifestyle choices, and regular physical activity. In recent years, gyms and fitness centers have become popular for individuals seeking structured exercise routines to enhance their fitness levels. Alongside this positive trend, there has been a growing concern over the misuse of anabolic-androgenic steroids (AAS) among gym-goers. These synthetic derivatives of testosterone are often used to enhance muscle growth and performance but pose serious health risks, including cardiovascular issues, liver dysfunction, hormonal imbalances, and psychological effects. Despite their medical applications, non-prescribed steroid use remains widespread, driven by peer influence, misinformation, and pressure to achieve rapid physical transformation.

Studies indicate a high prevalence of AAS use among fitness enthusiasts, with many individuals unaware of their long-term consequences. Zaheer Uddin *et al.* (2019) [18] conducted a descriptive study to assess the knowledge and attitude regarding the usage and perception of anabolic-

androgenic steroids among male gym attendees in Quetta city, Pakistan. The study results revealed that approximately 60% of the respondents agreed that anabolic steroids could be purchased and used without the advice of a professional trainer or healthcare professional. The findings of the study provided clear and convincing evidence of the high frequency of anabolic-androgenic steroid use among gym users. Another study on the Usage and Perceptions of Anabolic-androgenic Steroids among Male Fitness Centre Attendees in the Urban Area of Kancheepuram District in Tamil Nadu conducted by S. Prudhvi Balaji *et al.* (2019) [19] revealed that a significant number of male fitness center attendees were using AAS. Their study highlighted that 84% of AAS users sourced the drugs through gym members or dealers, and 53% were recommended to use AAS by their trainers, and findings underscore the influence of gym culture and peer recommendations on steroid use.

Research has shown that a significant percentage of gym users obtain steroids from unregulated sources and use them without medical supervision, increasing the risk of severe health complications. The growing use of anabolic steroids, particularly among gym users, highlights the need for awareness and education about their potential risks. The

researcher was further motivated to study this topic after observing a close friend, a powerlifter, who used steroids for less than a month. Upon inquiry, the friend revealed that he resorted to steroids because his competitors were using them to gain an advantage. Unaware of the side effects and complications, he felt pressured to follow it. This study aims to assess the knowledge and attitudes toward steroid usage among gym-goers to raise awareness about the harmful effects of steroid misuse and promote informed decision-making in the future.

### Statement of the Problem

A descriptive study to assess the knowledge and attitude regarding steroid usage among gym users in Coimbatore.

### Aim

The study aims to identify the knowledge levels and attitudes regarding steroid usage among gym users.

### Objectives

- To assess the knowledge of gym users regarding steroid usage.
- To assess the attitudes of gym users regarding steroid usage.
- To correlate the knowledge and attitudes of gym users regarding steroid usage.
- To associate the level of knowledge and attitude regarding steroid usage with selected demographic variables.

### Operational definition

1. **Knowledge:** It refers to the level of understanding and awareness that gym users have about steroid usage, including its types, benefits, side effects, and potential health risks.
2. **Attitude:** It refers to the beliefs, perceptions, and behavioral tendencies of gym users toward steroid usage, whether positive or negative.
3. **Steroid Usage:** It refers to the use of anabolic steroids, either prescribed or non-prescribed, by gym users for purposes such as enhancing physical performance, increasing muscle mass, or improving appearance.
4. **Gym Users:** It refers to individuals who regularly attend gyms or fitness centers for physical exercise and fitness activities, irrespective of their age, gender, or fitness goals.

### Assumption

- A gym person using steroids may not have adequate knowledge about its side effects.
- Peer influence and competition may contribute to steroid usage among gym users.
- Misconceptions and lack of awareness about the side effects of steroids could influence the attitudes of gym users.

### Delimitation

The study was delimited to gym users in a selected area

### Scope of the Study

The scope of this study focuses on gym users, assessing their knowledge and attitudes regarding steroid usage,

including its side effects, benefits, and risks. It will include gym users of all ages, genders, and fitness levels. The findings will be beneficial for healthcare providers to raise awareness about the harmful effects of steroids and inform future educational programs promoting safe fitness practices. It also serves as a basis for further research on steroid usage in other regions and populations

### Research Methodology

**Research Approach:** Survey approach

**Research Design:** Non-experimental descriptive research design

1. **Research Setting:** The study was conducted in eight selected gyms in Suler, Coimbatore, a growing fitness hub with diverse gym-goers, ensuring a representative sample of individuals engaged in regular physical activity.
2. **Population and Sample Size:** The study population consisted of gym-goers aged 16 years and above. A total of 60 participants were selected from selected gym centers.
3. **Sampling Technique:** A non-probability convenience sampling technique

### Sampling criteria

**Inclusion Criteria:** Individuals aged 16 years and above, both male and female, willing to participate, and able to read and write in English.

**Exclusion Criteria:** Individuals who do not attend fitness centers regularly.

**Data Collection Tool:** A self-administered questionnaire, consisting of three sections. Section I includes demographic data, such as age, gender, educational status, place of residence, occupation, monthly income, marital status, height, weight, BMI, Health issues, type of gym, duration of years attending the gym, number of days visiting the gym/week, duration of workout, type of exercise in the gym, presence of trainer in the gym, trainer qualification, use of multivitamin/minerals supplement, follow a special diet, and the reason for going to the gym. Section II includes 19 multiple-choice questions evaluating the knowledge of steroid use and section III includes a 3-point Likert scale measuring the attitude regarding steroid use.

### Tool Development and Validity

The questionnaire was developed based on literature review and expert input, ensuring clarity and relevance. Content validity was established through expert review, with modifications made based on feedback.

### Data Collection Procedure

Formal permission was obtained from gym owners. Participants were informed about the study, and verbal consent was obtained. Data collection was conducted through structured questionnaires, ensuring confidentiality and participant cooperation.

### Data Analysis

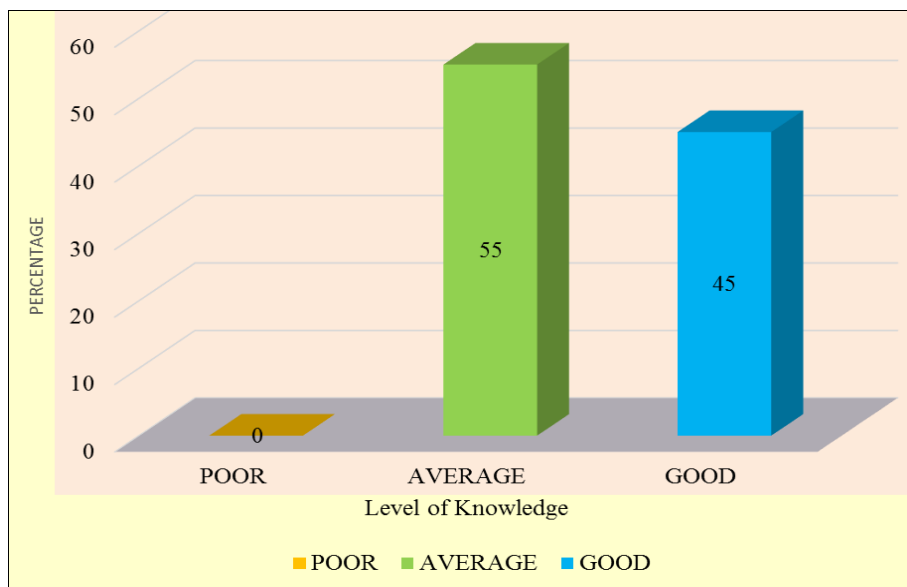
Data were analyzed using SPSS. Descriptive statistics (frequency, percentage, mean, standard deviation) were used for demographic data and knowledge/attitude levels.

Inferential statistics (chi-square test) were applied to assess associations, with  $P < 0.05$  considered statistically significant.

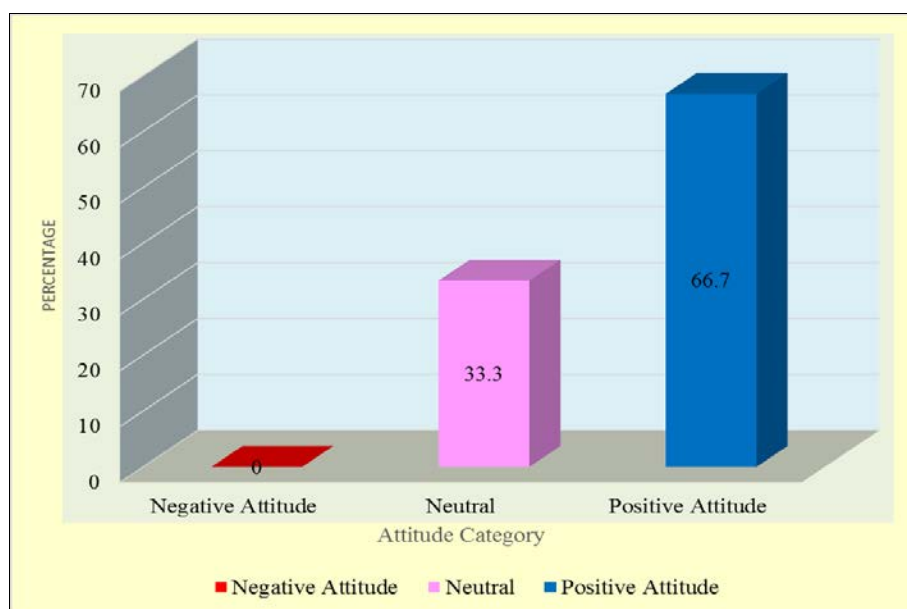
**Ethical Considerations:** Ethical approval was obtained from the institution. Participants' rights, confidentiality, and anonymity were maintained, with informed consent taken before participation.

**Result:** The findings of the study revealed that the majority of the gym users were male (83.3%) and aged between 20-30 years (63.3%). According to the educational status, most participants (80%) were undergraduate students. Regarding occupational status, the majority of the participants were students (70%), 56.7% resided in urban areas and nearly one-third (31.7%) had a monthly income between ₹20,000-₹30,000. The majority (85%) were single. Regarding health

status, 48.3% of participants had a normal BMI, while 33.3% were overweight, 16.7% were underweight, and only 1.7% were obese. Most participants (93.3%) reported having no health issues. Regarding Gym-Related Information, a majority of gym users (81.7%) attended a fitness center, with 38.3% having been gym members for less than six months. More than half (55%) visited the gym daily, while 76.7% exercised for 1-2 hours per session. Weightlifting was the most common type of exercise (65%), followed by treadmill workouts (16.7%). More than half (53.3%) followed a special diet, while 33.3% used multivitamins or mineral supplements. The main reasons for gym attendance included fitness (45%) and bodybuilding (38.3%), while a small percentage (10%) aimed for weight loss. Most participants (85%) reported the presence of a trainer in their gym, and among them, 93.3% of trainers were considered qualified.



**Fig 1:** presents the percentage distribution of samples according to the level of knowledge regarding steroid usage among GYM users.



**Fig 2:** presents the percentage distribution of attitudes regarding steroid usage among GYM user

**Table 1:** presents the mean, standard deviation, and correlation coefficient between knowledge and attitude regarding steroid usage

Variables	Mean	Standard Deviation	r - Value
Knowledge	12.18	2.69	r = 0.165
Attitude	21.53	3.09	

Additionally, the findings indicate that there was no significant association between the level of knowledge and demographic characteristics such as age, gender, educational status, occupation, income, marital status, BMI, and health status. Also, there was no significant association between attitude and personal characteristics, BMI, and health status. Additionally, there were no significant association were found between the level of knowledge and attitude with gym-related information. Whereas, the type of exercise performed in the gym showed a significant association with the level of knowledge about steroid usage.

**Discussion**

The findings of the present study revealed that the majority of the gym users were male (83.3%), the main reasons for going to the gym included fitness (45%) and bodybuilding (38.3%), while a small percentage (10%) aimed for weight loss. More than half (55%) of the participants had an average level of knowledge, and the remaining 45% had a good level of knowledge regarding steroid usage. The present study was supported by the study conducted by I Abumunaser *et al.* (2024) [1] to assess the knowledge and awareness of anabolic-androgenic steroid use as a body shape enhancer and its side effects among adult gym participants in Jeddah, Saudi Arabia. Their results revealed that out of 269 adult gym users, 6.3% of adults had used anabolic-androgenic steroids, 185 (68.8%) were male, the most reported reasons for going to the gym were fitness (63.2%), muscle building (52.8%), entertainment (39.4%), and weight loss (37.9%). Additionally, 75.1% of male adults and 76.8% of university graduates demonstrated good knowledge and awareness.

**Conclusion**

The study concluded that gym users had moderate to good knowledge regarding steroid usage, and a majority exhibited a positive attitude towards its use despite potential health risks. There was a weak positive correlation between knowledge and attitude, indicating that increased awareness slightly influenced perceptions. Additionally, the type of exercise performed in the gym showed a significant association with the level of knowledge about steroid usage, and no significant associations were found between knowledge and attitude with other demographic variables. The study highlights the need to prioritize structured awareness programs, professional guidance from certified trainers, and strict gym policies to promote safe and informed fitness practices.

**Implication**

**Nursing Practice:** Nurses play a crucial role in promoting awareness about the risks and side effects of steroid usage among gym users. Community health nurses can conduct health education programs in gyms, fitness centres, and educational institutions to promote informed decision-making. Additionally, nurses working in sports medicine and rehabilitation centres can provide counselling and

guidance to individuals who may be at risk of steroid abuse. Encouraging gym trainers to collaborate with healthcare professionals for better health monitoring can further support preventive strategies.

**Nursing Education:** Nurse Educators can recommend integrating information about performance-enhancing drugs, including steroids, into nursing curricula, which is essential to prepare future nurses to address steroid misuse issues effectively. Nursing students should be trained to recognize signs of steroid misuse and provide appropriate education and counselling to individuals at risk. Organizing workshops and seminars on substance abuse prevention, including steroid use, can enhance nursing students' knowledge and preparedness.

**Nursing Administration:** Nursing administrators can implement awareness programs in hospitals, community centres, and fitness centres to educate individuals about the consequences of steroid use. They can integrate steroid-related health education into outpatient clinics and wellness programs to reach a broader audience. Training programs for nurses should include sports health, performance-enhancing drugs, and their implications to enhance their ability to counsel and support gym users.

**Nursing Research:** Nurse Researchers should encourage nurses to integrate research findings into practice, promoting evidence-based care to improve outcomes for gym users. To maximize impact, researchers should disseminate their findings through conferences, seminars, and publications in national and international journals, thereby benefiting a broader audience in community settings. In the future, qualitative research studies should be conducted to focus on the motivations and experiences of individuals using steroids can provide deeper insights and inform evidence-based nursing intervention.

**Limitations of the study**

- Conducted on a limited number of gym users, which may not fully represent the larger population.
- Focused on a specific area, limiting the generalizability of the findings to other regions
- Responses were based on self-reported information, which may be influenced by bias.

**Recommendation**

- Replicate the study with larger samples in different settings and populations.
- Replicate the study with a larger sample size across different geographical locations to enhance the generalizability of the findings.
- Conduct a comparative study between gym users who use steroids and those who do not, to analyze the differences in health outcomes.
- Perform a longitudinal study to assess the long-term

effects of steroid usage on physical and psychological health.

- Conduct qualitative research to explore the motivations and personal experiences of individuals using steroids.
- Explore the association between steroid usage and mental health factors such as body image issues, anxiety, and depression.
- Study the role of social media and peer influence in shaping attitudes toward steroid use among gym users.

#### Conflict of Interest

There were no conflicts of interest related to this study and conducted the research without any external influence or bias.

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