



ISSN: 2456-0057

IJPNPE 2024; 9(1): 184-188

© 2024 IJPNPE

[www.journalofsports.com](http://www.journalofsports.com)

Received: 28-01-2024

Accepted: 03-03-2024

**Vinod Jacob**

Assistant Professor, Department of Physical Education, Sree Narayana College, Cherthala, Kerala, India

**Dr. Biju Kumar K**

Assistant Professor, Department of Physical Education, Sree Narayana College, Cherthala, Kerala, India

**Dr. Madhavan N**

Assistant Professor, Department of Physical Education, Sree Narayana College, Cherthala, Kerala, India

## Attitude and perceptions towards performance enhancing substances use among college level sportsmen

Vinod Jacob, Dr. Biju Kumar K and Dr. Madhavan N

DOI: <https://doi.org/10.22271/journalofsport.2024.v9.i1c.2916>

### Abstract

**Introduction:** The environment of youth sports in Kerala, like many other places, faces challenges regarding Performance-Enhancing Substances (PES). The reason for such situation is assumed as: Awareness and Education, Pressure to Excel, Accessibility, Role of Coaches and Parents, Testing and Regulation, Support Systems, Cultural Factors. Some of the athletes using nutritional supplements or prohibited means such as doping to cope with these situations and to gain an edge in competition.

**Objectives:** In view of lack of literature investigating the use of doping in Kerala youth sports. The objective of the study was to determine attitude and perceptions of college level sportsmen regarding the use of Performance Enhancing Substances (PES).

**Methods:** The design of study was cross sectional and used self-administered questionnaire to get data for analysis. Samples were obtained from intercollegiate level sportsmen who are residents of Alappuzha district of Kerala state. Questionnaires were administered in a condition where no interaction with other participants and no presence of higher official (coaches, Teachers, Trainers) who can influence the response. Demographic data were analyzed using descriptive statistics.

**Results:** Among 100 intercollegiate level athletes 61% believe that the use of PES among them is in a rise and 39% not believe so. Among the above mentioned 39% samples 40% (15) (N=39) recognizes common banned performance enhancers and 60% (23) stayed ignorant about that. From these 40% participants 15 samples identified anabolic steroid, 15-Growth hormone and 10 adrenalins as the banned substances in the field.

From non-prohibited substances the majority 90% have responded that vitamin supplementation is permitted and utilized in the field. For the other permitted substances response by participants are: caffeine (N=100) 40, Creatine (N=100)62, Carbohydrate (N=100)74, Protein supplementation (N=100)83 was also observed. A Majority 93% agree that PES improve performance in the competitive field, 31% believe that if PES not used, he or she may be avoided from the squad. None of them responded about the stress management benefit of PES. There were direct questions asked through questionnaire about general perception and attitude towards PES use of Alappuzha district intercollegiate level athletes. Almost all the respondents said that they need more education regarding PES, 90% of the respondent responded all kind of sale of banned substances prohibited. 87% believe that there is a rise in the PES use in sports. 33% responded towards stricter punishment is required for doping, only 17% believe that there is pressure to use PES and 83% responded negatively to that question. A vast 73% believe that the random dop test will not stop PES usage in sports. Only 14% is aware of the substances banned by WADA. Only 3% is aware about the punishments if caught for doping. And the majority of 97% recommended more tests for doping should be carried out in the University level sports. Specific attitude and perceptions were measured with a questionnaire. Out of 11 Questions 6 were directly enquiring respondents' attitudes and perception away from use of PES and Doping (Question no: 1, 2, 4, 5, 6, 10). The specific attitude and perception are measured by 77.16% of the respondents have strong belief against PES use / Doping.

**Conclusion:** Graduate level sportsmen who are using PES (Performance Enhancing Substances) and supplements are in rise for last 5 years. Even though the general attitude and perceptions towards prohibited substances are favorable to the values set by the society. Majority of participants shown negative attitude towards doping due to their strong perceptual standards.

**Keywords:** Performance enhancing substances, perceptions, doping

### Introduction

The world Anti-Doping Agency (WADA) is the leader in the fight against doping world wide and the list of Prohibited Performance Enhancing Substances (PES) are updated by annually.

**Corresponding Author:**

**Vinod Jacob**

Assistant Professor, Department of Physical Education, Sree Narayana College, Cherthala, Kerala, India

The signatories under WADA are the national anti-doping agencies and they compliment and coordinate with these anti-doping efforts by WADA. Hence the list of banned PES mandatory to all the nations participating international sports. In India even after continues Anti-Doping efforts by NADA (National Anti-Doping Agency) the list of athletes caught for doping is in a rise for last 5 years. As the national and state level competitions bring all these sportsmen together and there may be exchange of information, it is important to investigate the perceptions and attitude of athletes regarding use of PES. Understanding the present environment in youth sports this study therefor investigate the prevalence, General attitude and perceptions, Specific attitude and perceptions of Kerala inter-collegiate level athletes towards the use of PES

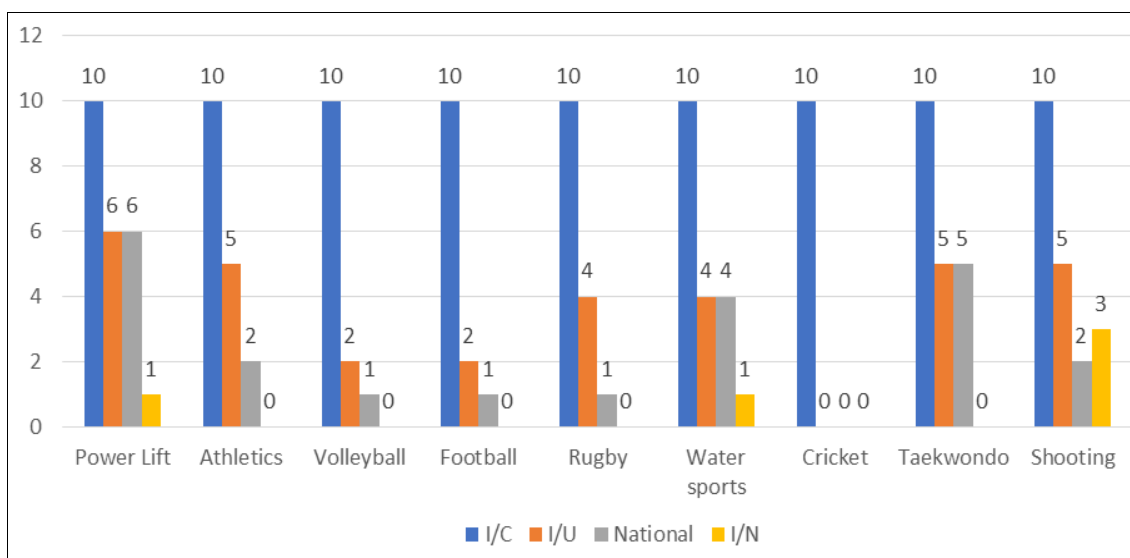
**Methods**

The study used a cross-sectional method design with self-administered questionnaire. The questionnaire was adopted from a study conducted on South African high school athletes about perceptions and attitude towards the use of banned substances. (4<sup>th</sup> clinical Sports medicine conference organized by clinical sports and exercise research group UCT/MRC Research unit for exercise science and sports medicine (ESSM), Department of human biology, Faculty of Health Sciences, University of Kape Town, South Africa). Validity of adapted questionnaire was established and was found 83% reliable and validated by research guides of University of Kerala. The questionnaire was formulated to elicit responses

on PES and nutritional supplements used in order to improve performance. The participants’ attitudes and per captions regarding PES use were solicited, such as beliefs about PES use in sport and whether education on doping was needed. A sample of participants was attained from Inter collegiate level both male and female athletes age group of 18 to 24 years. On the basis of prior permission from different colleges of Alappuzha district, Kerala researcher administered the questionnaire on the date and time informed earlier. They completed the questionnaire under conditions where participants were not allowed to communicate with each other. The participants were also given the opportunity to ask questions pertaining to the content and completion of the questionnaire. Questionnaires were handed in to the researcher immediately after completion. The collected data were then group-analyzed using the SPSS software package. Data were descriptive and involved summary statistics displaying frequencies and percentages.

**Results**

The responses of the participants were coded and missing values were not included in the analysis because it was not possible to determine what the participants would have answered in these cases. Fig.1 Participants of this study are from Games and each having equal (10) samples. All representer college level completions at least and some have participated inter-university, national and International (N= 100).



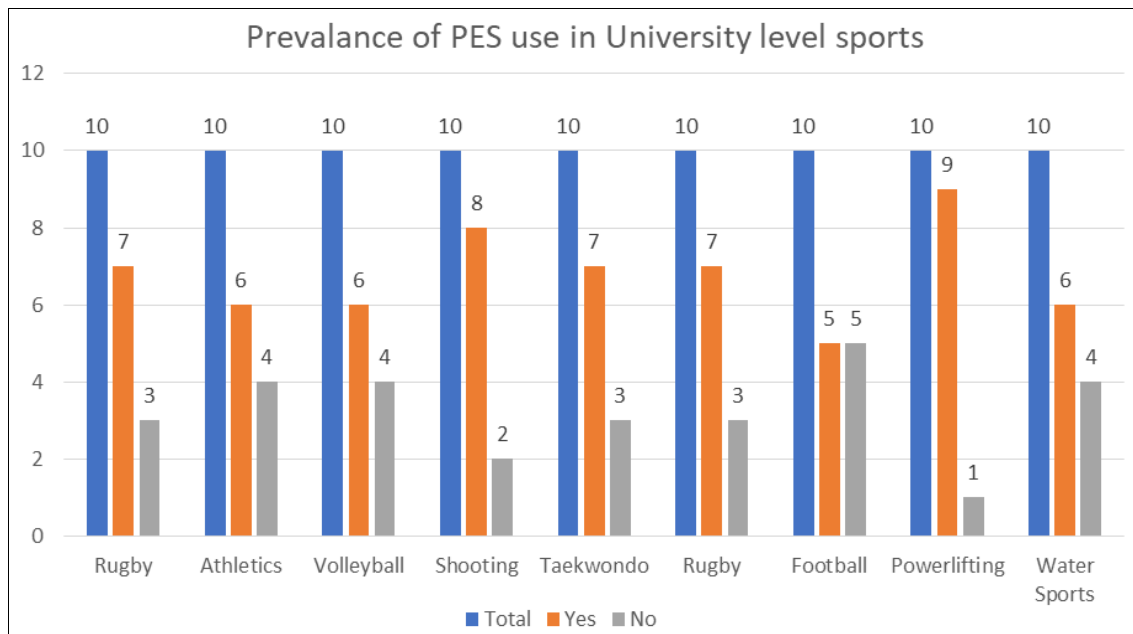
I/C= Inter collegiate, I/U= Inter University, National = Association Nationals, I/N= Inter National

**Fig 1:** Sample classification

**Prevalence of performance enhancing substances**

Among 100 intercollegiate level athletes 61% believe that the use of PES among them is in a rise and 39% not believe so (Fig-2). Among the samples 40% (N=100) recognizes common banned performance enhancers and 60% stayed ignorant about that. From these 40 participants 15 samples identified anabolic steroid, 15-Growth hormone and 10 adrenalins as the banned substances in the field. (Table-1). From non-prohibited substances the majority 90% have

responded that vitamin supplementation is permitted and utilised in the field. For the other permitted substances response by participants are: caffeine (N=100) 40, Creatine (N=100)62, Carbohydrate (N=100)74, Protein supplementation (N=100)83 were also observed. A Majority 93% agree that PES improve performance in the competitive field, 31% believe that if PES not used, he or she may be avoided from the squad. None of them responded about the stress management benefit of PES.



**Fig 2:** The use of PES in university level sports believed to be on the increase (N = 100)

**Table 1:** Prevalence of substances used and reason for using it

Prevalence of PES in sports	
Yes	61
No	39
No Response	0
Common prohibited substances used	
Anabolic androgenic steroids	(N=23) 15
Growth hormone	(N=23) 15
Adrenaline/ephedrine	(N=23) 10
Insulin	0
Common non-prohibited supplements used	
Caffeine supplementation	(N=100) 40
Creatine supplementation	(N=100)62
Carbohydrates supplementation	(N=100)74
Protein supplementation	(N=100)83
Vitamin supplementation	(N=100)90
Reasons for using PES	
Assists me in coping with the stresses of sport	(N=100)22
Helps to improve the way I perform in sport	(N=100) 71
Helps to reduce food craving in order to decrease my body weight	(N=100)16
I feel afraid of being dropped from the team	(N=100)15
I will have a better chance of making the team	(N=100)27

**General Attitude and Perception towards PES use (Fig-3)**

There was direct questions asked through questionnaire about general perception and attitude towards PES use of Alappuzha district intercollegiate level athletes. All the questions were responded by all the samples and response are shown in the figure 3. Almost all the respondents said that they need more education regarding PES, 90% of the respondent responded all kind of sale of banned substances prohibited. 87% believe that there is a rise in the PES use in sports. 33% responded

towards stricter punishment is required for doping, only 17% believe that there is pressure to use PES and 83% responded negatively to that question. A vast 73% believe that the random dop test will not stop PES usage in sports. Only 14% is aware of the substances banned by WADA. Only 3% is aware about the punishments if caught for doping. And the majority of 97% recommended more tests for doping should be carried out in the University level sports. General Attitude and Perceptions towards PES use.

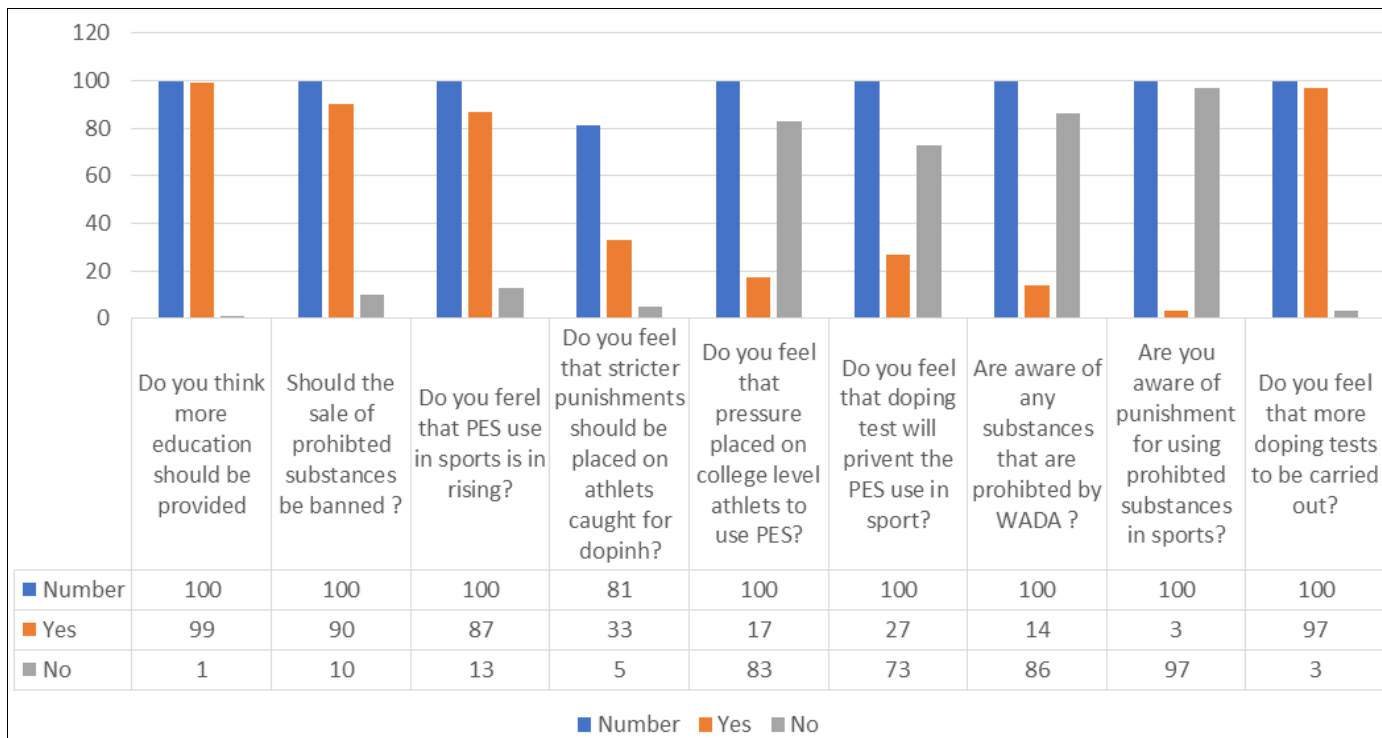


Fig 3: General attitude and perceptions towards PES use

**Specific Attitude and Perceptions towards PES use**

In this section more direct questions were asked through questionnaire and the response were recorded in 6-point range (responses: Strongly agree, Agree, Neutral, Disagree, Strongly Disagree) All the questions were answered by all the

samples. Out of 11 Questions 6 were directly enquiring respondents attitudes and perception away from use of PES and Doping (Question no: 1, 2, 4, 5, 6, 10) and 77.16% of the respondents have strong belief against PES use / Doping.



Fig 4: Specific attitude and perception towards use of PES

## Conclusion

Graduate level sportsmen who are using PES (Performance Enhancing Substances) and supplements are in rise for last 5 years. Even though the general attitude and perceptions towards prohibited substances are favourable to the values set by the society. Majority of participants shown negative attitude towards doping due to their strong perceptual standards.

## References

1. Al Ghobain M. Attitudes and behavior related to performance-enhancing substance use among elite Saudi football players. *BMC Sports Science, Medicine and Rehabilitation*. 2019;11(1). Available from: <https://doi.org/10.1186/s13102-019-0149-1>
2. Badr el Dine FMM, Attia MAH. Assessment of knowledge, perception, attitude, and use of performance-enhancing substances among students of Faculty of Medicine, Alexandria University, Egypt: a pilot study. *Egyptian Journal of Forensic Sciences*. 2022;12(1). Available from: <https://doi.org/10.1186/s41935-022-00290-6>
3. Chan SY, Lim MC, Shamsuddin AF, Tuan Mahmood TM. Knowledge, attitude and perception of Malaysian pharmacy students towards doping in sports. *Journal of Pharmacy Practice and Research*. 2019;49(2). Available from: <https://doi.org/10.1002/jppr.1478>
4. Constantinou D, Aguiyi I. Use, Perceptions and Attitudes of Cognitive and Sports Performance Enhancing Substances Among University Students. *Frontiers in Sports and Active Living*. 2022;4. Available from: <https://doi.org/10.3389/fspor.2022.744650>
5. Cox LTJ, Bloodworth A, McNamee M. Doping in recreational Welsh Rugby Union; Athletes' beliefs and perceptions related to Anti-Doping policy and practice. *Performance Enhancement and Health*. 2022;10(2). Available from: <https://doi.org/10.1016/j.peh.2021.100211>
6. Gradidge P, Coopoo Y, Constantinou D. Attitudes and perceptions towards performance-enhancing substance use in Johannesburg boys high school sport. *South African Journal of Sports Medicine*. 2010;22(2). Available from: <https://doi.org/10.17159/2078-516x/2010/v22i2a313>
7. Mazanov J, Petróczi A, Bingham J, Holloway A. Towards an empirical model of performance enhancing supplement use: A pilot study among high performance UK athletes. *Journal of Science and Medicine in Sport*. 2008;11(2). Available from: <https://doi.org/10.1016/j.jsams.2007.01.003>
8. McNaughton M, Hunt DL, O'Brien M, Sugimoto D, Miller P, Meehan WP, *et al.* Sport specialisation and performance-enhancing substance use by young athletes. *BMJ Open Sport and Exercise Medicine*. 2023;9(4). Available from: <https://doi.org/10.1136/bmjsem-2023-001702>
9. Moston S, Engelberg T, Hutchinson B. Knowledge of Doping: How Athletes Learn about Doping Rules and Practices. In *Global Sport Management*.
10. Mroczkowska H. Moral attitudes towards doping - What do athletes on the verge of maturity value? *Biology of Sport*. 2009;26(3). Available from: <https://doi.org/10.5604/20831862.894657>
11. Nicholls AR, Perry JL, Levy AR, Meir R, Jones L, Baghurst T, *et al.* Coach perceptions of performance enhancement in adolescence: The sport drug control model for adolescent athletes. *Performance Enhancement and Health*. 2014;3(2). Available from: <https://doi.org/10.1016/j.peh.2015.07.001>
12. Rintaugul EG, Mwangi FM. Knowledge, attitudes and perceptions on doping among university students in physical education and sport science related degree programmes. *Journal of Human Sport and Exercise*. 2021;16(1). Available from: <https://doi.org/10.14198/jhse.2021.161.16>
13. Sukys S, Tilindiene I, Majauskiene D, Karanauskiene D. Moral identity and attitudes towards doping in sport: Whether perception of fair play matters. *International Journal of Environmental Research and Public Health*. 2021;18(21). Available from: <https://doi.org/10.3390/ijerph182111531>
14. Tsivitanidou O, Christodoulides E, Petrou M. High-School Athletes' Knowledge, Attitudes, and Perceptions on Doping: The Cyprus Sport-School Study. *Youth*. 2023;3(2). Available from: <https://doi.org/10.3390/youth3020040>
15. Vangrunderbeek H, Tolleneer J. Student attitudes towards doping in sport: Shifting from repression to tolerance? *International Review for the Sociology of Sport*. 2011;46(3). Available from: <https://doi.org/10.1177/1012690210380579>
16. Vargo EJ, James RA, Agyeman K, MacPhee T, McIntyre R, Ronca F, *et al.* Perceptions of assisted cognitive and sport performance enhancement among university students in England. *Performance Enhancement and Health*. 2014;3(2). Available from: <https://doi.org/10.1016/j.peh.2015.02.001>
17. Weissinger E, Housh TJ, Johnson GO, Evans SA. Weight Loss Behavior in High School Wrestling: Wrestler and Parent Perceptions. *Pediatric Exercise Science*. 2016;3(1). Available from: <https://doi.org/10.1123/pes.3.1.64>
18. Singh D. Awareness perceptions and attitude towards doping among sportspersons in Punjab a survey study. Available from: <http://hdl.handle.net/10603/262140>