

DOPING KNOWLEDGE AND PRACTICE AMONG ELITE ATHLETES IN TERTIARY INSTITUTIONS IN NIGERIA

I. O. Akindutire, PhD

(Corresponding Author)

Lecturer in the department of human kinetics and health education, Faculty of education,

University of Ado-Ekiti, Nigeria

J. A. Adegboyega, PhD

Lecturer in the department of human kinetics and health education, Faculty of

education, University of Ado-Ekiti, Nigeria

J. A. Olanipekun, PhD

Lecturer in the department of human kinetics and health education, Faculty of

education, University of Ado-Ekiti, Nigeria

Abstract

This study investigated doping knowledge and practice among the elite athletes in tertiary institutions in Nigeria. Also, it examined the extent to which athletes in tertiary institutions have actually used doping substances. A total of 510 athletes (255 males and 255 females) were randomly sampled from tertiary institutions in three states (Ekiti, Ondo and Oyo States). A structured questionnaire designed by the researchers was used to collect relevant data for the study. The data collected were analysed using descriptive statistics, Chi-square (X^2) test and Analysis of variance (ANOVA).

The results showed that athletes in tertiary institutions were aware of doping substances used in sports. The athletes had tried doping substances such as methadone, cocaine, phenobarbital, stanozolol, nandrolone decanoate and caffeine. The study revealed that more male than female athletes engaged in doping practices. Also, the type of sports participated by the athletes influenced their doping habits.

It was therefore recommended that the Nigerian Government should intensify its campaign and public enlightenment programmes to educate the athletes and sports handlers on the health consequences of doping to enhance sports performance. Also, the Government should make funds, facilities and personnel available for a forensic laboratory for drug testing.

Keywords: Doping, elite athletes, doping agents, drug use, drug abuse

Introduction

Throughout history, dating from the period of ancient Greece, sports played important roles in many societies. However, their importance accelerated rapidly in the last thirty years. Nowadays, victory in sports is construed to indicate political superiority. Winning athletes occupy positions of high esteem within their societies and in some countries the financial rewards are quite handsome. This has made modern day sporting activities become a big multi-million dollar industry, thereby escalating the price of victory.

The rewards for winning are so high nowadays and the penalties for losing are so severe that sport administrators, coaches trainers and athletes may succumb to the temptation to win at all costs. They may not care about the methods they employ as long as they win. The salaries of coaches and managers are now high, compared with what they were receiving only a few years ago. However, there are strings attached, if the team fails to succeed, the manager or coach is unceremoniously sacked. It is not surprising therefore, that athletes go to great lengths in finding ways to enhance their sports performance. Thus, the use of doping by athletes to improve sports performance and achieve superiority over the opponents becomes a worldwide problem.

Doping is viewed as the practice of administering or the use of substances in any form alien to the body in abnormal method with the exclusive aim of attaining an artificial and unfair increase of performance in competition. The wide spread of doping in sports began particularly amongst the followers of pop music with a pharmacological revolution which began in the sixties. Surprisingly, athletes have discovered some ingredients in these chemical agents that could be used to enhance performance beyond anything that they could achieve by hard work and rigorous training programmes. These athletes felt that they could simply select the most specific drugs to meet their particular needs for improving performances.

Consequently, there was a mass production and use of dope substances with adverse effects for sports performance when the national and international sports became excessively competitive and commercialized, thus, the prevalence of doping in sports was high. Several efforts had been made to combat doping in athletics as far back as 1963, having caught the athletes in doping ranging from the use of alcohol to anabolic steroids.

It is universally known that some top athletes dope themselves to enhance their performances. For instance, doping was widely spread as a social problem during the 1984 Olympic Games in Los Angeles, the 1988 Seoul Olympic and re-enforced in the 1996 Atlanta Olympic Games. Synthetic Reports revealed that 37 champions from two Federations were tested for doping and 12 (32%) out of the sample taken, tested positive. In 1992, 69 athletes tested positive in 56 sports' Federations. Laure (1999) reported that the global sporting events witnessed through internet data the seizure of prohibited substances as ergogenic aids, the dismantling of global distribution networks as well as tragic fate of some 18 Belgian and Dutch cyclist champions who died of erythropoietin (Epo) and anabolic steroids.

The widespread use of doping agents has fundamentally distorted the upper limit of human performance. It is possible for the national athletes to compete without chemical assistance to achieve record-breaking performance in sports requiring strength, power, speed and endurance. Doping in sports represents a major threat to the existence, principles and practice of modern competitive sports (WADA Code, 2005). It is an issue of concern which poses a great threat to the development of sports ideals in the twenty-first century Africa and indeed the world. Athletes who dope create an uneven playing field for their peers who compete free of performance – enhancing compounds or methods. At the same time, the health risks inherent in doping are considerable. Doping has so much become a topical issue

in international sports that it is no longer possible to mention international sports competitions without mentioning drugs.

The prevalence of doping in sports may be better appreciated by the number of athletes caught using prohibited substances as reported by the IOC Medical Commission in accredited laboratories around the world between 1985 and 2006. In 1985, 930 cases were detected; in 1986; 627 cases; in 1987, 854 cases were recorded. In 1988, 1153 cases; in 1989, 1341 cases and in 1990, 1064 cases were detected with 30 different kinds of ergogenic drugs being used by athletes. In the same vein, Dore (1995) reported that 89,166 cases out of which 1,222 athletes tested positive by IOC Medical Commission in 1993. The International Paralympics Committee sanctioned 9 athletes between 2005 and 2006 for anti-doping rule violations for a period of 2 years.

In Nigeria, there were reported cases of athletes tested positive to performance – enhancing drugs, most especially in weight lifting and athletics. For instance, there were 15 reported separate cases of doping involving Nigerian athletes from 1985 to 2006. More recently, three female Nigerian undergraduate athletes tested positive for anabolic steroids during the 12th IAAF World Athletics Championship in Berlin¹⁵. In the same vein, there had earlier reported cases of doping among the Nigerian University athletes. The prevalence of doping among the University athletes is not surprising because about 40 percent of the athletes representing Nigeria at the International competitions are from tertiary institutions. Such tertiary institutions in Nigeria include the Universities, Polytechnics and Colleges of Education.

Few studies undertaken on drug use in sports in Nigeria had generally limited their scope on University and secondary school athletes. Most of these studies were limited to the extent of drug use among the athletes. None of the few studies carried out in Nigeria cover doping knowledge and practice among the athletes in the tertiary institutions. However, it seems reasonable to suggest that athletes from tertiary institutions in Nigeria may not be totally free from doping as a result of their interactions with other athletes at the international competitions. Because of the absence of sufficient and reliable data in Nigeria on which generalization could be based, the present study therefore, was designed to investigate doping knowledge and the extent to which athletes in tertiary institutions were involved in doping practice.

Research Questions

This study attempted to find answers to the following research questions:

1. Are the sportsmen and women in tertiary institutions aware of doping substances used in sports?
2. To what extent are sportsmen and women attending tertiary institutions involved in doping practices?

Methodology

The descriptive survey research design was used in this study. The usability of the design was hinged on its suitability for gathering data from a relatively large number of cases at a particular time.

The population of the study comprised all elite sportsmen and women in tertiary institutions in Nigeria. These elite sportsmen and women were those athletes that had participated at the national or international sports competitions. These categories of sportsmen and women are in the Colleges of Education that competed at the Nigeria Colleges of Education Games (NICEGA), the Polytechnics that competed at Nigeria Polytechnic Games (NIPOGA) and Universities that participated at the Nigeria University Games (NUGA).

The participants used for this study were 510 elite sportsmen and women (255 males and females, respectively) sampled in the three states (Ekiti, Ondo and Oyo) out of the six states in the southwest zone of Nigeria. Three tertiary institutions were randomly selected from each of the three states. 60 elite sportsmen and women who had represented their institutions at least once at national and international competitions were purposively selected from each of the tertiary institutions. The participants were stratified by their sex (either male or female) and by the type of sports (Individual, Dual and Team Sports) they were involved in.

Data for this study were collected using a structure questionnaire designed by the researchers. The instrument was designed to probe doping knowledge among the athletes, determine the type of sports of dopers, the doping methods and type of drugs used. The instrument had a reliability index of 0.80.

The consent of the participants and sports supports personnel were sought before the administration of the instrument. The researchers with the assistance of 4 research assistants explained the rationale for the study before administration. The participants were assured of the confidentiality of all the information given.

The data collected for the study were analysed using both descriptive and inferential statistics of Chi-Square (χ^2) and Two-way Analysis of Variance (ANOVA) at 0.05 alpha levels.

Results

Research Question 1: Are the sportsmen and women in tertiary institutions aware of doping substances used in sports?

Table 1:Percentage Analysis on Doping knowledge by Sportsmen and women.

Performance-Enhancing drugs	Heard about substance		Seen substance		Never heard substance		Use substance currently		Never use substance	
	N	%	N	%	N	%	N	%	N	%
Heroin	42	84.1	29	5.7	20	3.9	25	4.9	7	1.4
Morphine	9	45.1	11	21.8	15	30.4	11	2.2	3	0.5
Methadone	23	29.4	1	14.9	5	48.8	27	5.3	8	1.6
Opium	15	31.9	76	15.1	24	30.9	4	0.8	9	1.8
Amphetamine	0	39.2	77	21.2	15	37.8	5	1.0	4	0.8
Ephedrine	16	31.9	10	14.9	7	48.8	11	2.2	11	2.2
Cocaine	3	34.9	76	25.9	19	32.7	23	4.5	11	2.2
Phenobarbital	20	43.5	13	31.4	3	17.8	31	6.1	6	1.2
Caffeine	16	42.4	2	35.9	9	17.8	19	3.7	1	0.2
Anabolic steroids	3	52.7	16	27.5	16	19.8	0	0	51	100.
Stanozolol	17	23.1	0	22.7	7	45.1	35	6.9	0	0
Dianabol	7	37.3	18	31.9	91	29.0	8	1.6	11	2.2
Nandrolone	22		3		91				1	0.2
	2		14							

decanoate	21	28.6	0	23.1	10	39.4	37	7.3	8	1.6
Barbiturates	6	23.9	11	19.6	1	28	28	5.5	9	1.8
	26		6		23					
	9		16		0					
	11		3		14					
	8		11		8					
	19		8		20					
	0		10		1					
	14		0		25					
	6				3					
	12									
	2									

Table 1 shows that there is a wide gap between having heard about or seen a particular drug and actually trying or using it. While a large number of respondents heard about the drugs, only a small number actually used or tried them. As table 1 indicates 4.9% of the respondents were using heroine. Other doping substances already tried by the respondents included, methadone (5.3%), cocaine (4.5%), phenobarbital (6.1%), caffeine (3.7%), stanozolol (6.9%), and nandrolone decanoate (5.5%). Out of the fourteen identified doping substances, only one of them i.e. anabolic steroids, had not been tried by the respondents. Thus, sportsmen and women in tertiary institutions were aware of doping substances used in sports.

Research Question 2

To what extent do sportsmen and women attending tertiary institutions involve in doping practices?

Table 2 below shows the extent of doping practice among sportsmen and women in tertiary institutions.

Table 2: Extent of doping practice by gender of respondents

Extent of doping practice	Male		Female		Total	
	N	%	N	%	N	%

To a great extent	123	48.5	13	5.1	136	26.7
To some extent	90	35.2	76	29.8	166	32.5
Not at all	35	13.7	111	43.5	146	28.6
No response	7	2.7	55	21.6	62	12.2

Table 2 shows that 48.5% of the male and 5.1% of female respondents engaged in doping practices to a great extent. While 35.2% male and 29.8% of female respondents indicated that they had engaged in doping practice to some extent. Thus, more than half of the respondents 59.2% in this study engaged in the use of performance enhancing substances.

In order to determine the influence of gender of athletes and the type of sports with respect to the use of doping substances, a two-way Analysis of Variance (ANOVA) was computed. The results are presented in table 3:

Table 3: Two-way (ANOVA) on use of doping substances by gender and Types of Sports

Source		SS	df	MS	F
Sex	A	2273.68	1	2273.68	10.70*
Types of Sports	B	3415.68	2	1707.84	8.04*
Two-way Interaction A x B		2822.12	2	1411.06	6.64*
Error Term		107126.46	504	212.55	
Total		1246112.00	510		
Corrected total		116700.24	509		

* P<0.05 (significant)

Table 3 revealed that the effects of sex of respondents (Factor A) was statistically significant ($F_{1, 504} = 10.70$; $P < 0.05$). Scheffe post-hoc analysis revealed that male respondents used performance enhancing substance more significantly higher than their female counterpart. Similarly, the main effect of type of sports (Factor B) was statistically significant ($F_{2, 504} = 8.04$; $P < 0.05$). Post-hoc analysis revealed that respondents in team sports used performance enhancing substances more significantly than the individual and dual sports, respectively.

For instance, further analysis showed that respondents in football (9.6%), basketball (6.7%), handball (6.3%) and volleyball (4.9%) indicated their involvement in the use of doping substances. Also, the sex by type of sports (A x B) interaction was statistically significant. Thus, the type of sports participated in, by respondents had significant influence on the athletes' use of performance enhancing substances.

Discussion

The findings in this study provide support in some respects for many of the findings of previous studies. The present study has shown that many of the respondents were not ignorant of performance enhancing substances. For instance, more respondents had heard about stanozolol, nandrolone decanoate, dianabol, amphetamine, cocaine, ephedrine and caffeine than seen the substances. Some of the athletes under the study identified themselves with one form of doping agent or the other. This finding was consistent with the previous studies which reported that their respondents were aware of the use of doping agents in sports.

Furthermore, the study revealed that nearly above average of the respondents had heard about the doping agents but only few of them had used such agents. Also, sportsmen were highly involved in the use of doping substances than their female counterparts. This is also consistent with other studies which reported that sportsmen were involved in the use of performance enhancing substances. In the same vein, the United Nations asserted that exposure of Nigerian athletes to other nations through international competition, influence of athletes' support personnel, monetary or material reward, toughness of sports training and standard of sports competitions made the Nigerian athletes susceptible to doping substances. Prominent among doping substances used by the athletes were nandrolone decanoate, stanozolol, dianabol, morphine, amphetamine, opium, ephedrine and caffeine. This finding was similar to the reports that sportsmen and women used various types of doping substances to perform beyond their natural abilities, increase their speed, power, strength energy and endurance, most especially in athletics, cycling, soccer and weight lifting.

Moreover, the study revealed that female athletes, more than their male counterparts, engaged themselves in the use of manipulations to alter urine samples. This finding supported earlier findings that sportsmen and women especially at the elite level, used any method of doping available to them to enhance their performance beyond their natural abilities. It is not out of place to reason that athletes in the tertiary institutions may be

exposed to the knowledge of doping substances and methods by the athletes' support personnel and athletes from other nations through private discussions among them.

Conclusion and Recommendation

Based on the findings of this study, the following conclusions could be drawn

1. Sportsmen and women in tertiary institutions had heard about and saw all the doping substances identified in the study
2. Respondents in this study had tried doping substances, such as methadone, cocaine, phenobarbital, stanozolol, nandrolone decanoate and caffeine.
3. The type of sports participated by the respondents influenced their doping habits.

Recommendation

Based on the findings of this study, the following recommendations were made

1. The Nigerian Government should intensify its campaign and public enlightenment programmes to educate the athletes and athletes' support personnel on the health consequences of indiscriminate use of drugs to enhance performance.
2. Drug education should be an integral part of the curriculum in tertiary institutions in Nigeria
3. The National Sports Commission in Nigeria should intensify its efforts towards testing athletes for doping to prevent further international disgrace.
4. Government should make funds, facilities and personnel available for a virile forensic laboratory for drug testing. Three Nigerian Universities could be commissioned to embark on this project.
5. Stiffer penalties than the present 2-years ban could be meted out to those who are tested positive to any of the prohibited doping agents.

References:

- International Olympic Committee Medical Commission (1993): Directory of anti-doping regulation of international sports federations (2nd Ed). International Olympic Committee.
- International Olympic Committee Medical Commission (2006): Anti-doping directive. International Olympic Committee.
- Noakes, T. S. (2004): Cardiovascular risks and benefits of physical exercises. *Caribbean Journal of Exercise physiology*, 216(4), 288 – 296.
- Lambo, T. R. (1995): Anabolic steroids and strength and power related to athletics events. *Journal of physical Education and Recreation*, 47, 58 – 59.
- Oshodin, O. G. & Egor, G. O. (1999): Ethic perspectives of drug use in sports. *Journal of Health Education and Kinetics*, 1(1) 66 – 71.
- Synthetic Report (2007): Doping and sports: Collective expert assessment, Retrieved on March 3 from <http://www.curs.fr/cw/en/press/compressed/dopage/.html>
- Laure, P. (1999): Doping among amateur adult athletes aged 15+ and over. *Journal of performance Enhancing Drugs*, 2, 16 – 21.
- Hoberman, J. M. (2001): How drug testing fails: The politics of doping control in W.Wilson and K.Derse (Eds). *Doping in elite sports: The politics of drugs in the Olympic Movement Campaign III: Human Kinetics*, 241 – 270.
- Timothy, D. N. (2006): Anabolic steroids: Use and abuse South Africa: University of Cape Town. Sports Science Institute of South Africa.
- Timothy, D. N. (2001): Tainted glory – doping and athletic performance. South Africa: University of Cape Town, Medical Research Council Unit for Exercise Science and Sports Medicine.
- Woolley, R. S. (2000, May): Drug in society and sports in the United States. Paper presented at the World Symposium on Doping in Sports, Italy.
- International Olympic Committee Medical Commission (2007): Medical guide, scientific and practical activities. International Olympic Committee. Switzerland, 51 – 72, 90 – 95.
- Dore, A. A. (1995): Teenagers and drug use and abuse. *Northampton's Bulletin on Drugs*, 12(1), 11 – 14
- Emeka, I. (1991): Drug scare in Bauchi-Champion. *National Concord*, p. 5
- Ojeikere, A (2007, June, 28): Nigeria dangles ₦2.5 million at Flying Eagles to beat Costa Rica. *The Nation*, P.37

- Emiola, M. O. (1990): Drugs in Sports: A NUGA Experience in T. A. Adedjoja (Ed). Sports development in Nigerian Universities, Lagos, Abesson Raytons.
- Mgbor, M. O. (1992): Drug abuse in sports: A challenge to health education in 1990s. Nigerian Journal of Health Education, 1(1), 99
- Mgbor, M. O. (1995): A survey of knowledge and use of ergogenic drugs among elite athletes in Nigerian Universities. Journal of Nigerian Association of Health Education Teachers, 4(3), 17 – 21.
- Fawole, J. O. (1986): Smoking and Sports performance in selected Nigerian Secondary Schools. Paper presented at the 6th Annual NAPHER Conference, Calabar.
- Atolagbe, J. (1988): Knowledge of selected Nigerian athletes on the use of amphetamines. Proceeding of the Nigerian Association of Sports Science and Medicine (NASSM), Lagos, March 19
- Yusuff, Y. B. and Atare, O. O. (1999): The awareness of the effects of analgesics on sports performance among selected University Athletes. Proceedings of the NASSM Conference, 48 – 52.
- Boroffice, O. B. (1991): Doping knowledge among selected Nigeria athletes. Paper presented at the Annual Conference of Nigeria Association of Sports Science and Medicine (NASSM), Ile – Ife.
- Chado, M. A. (1986): Effects of ergogenic drugs in sports performance, physical and Health Education Research Journal 3 (1), 40 – 48
- Okujeni J. (1990, April 3): African athletes are no longer dope-free, The Guardian Newspaper, p. 3.
- United Nations (2005): World Health Organization expert committee on dependence producing drugs: Office of drugs and crime. 14th Report Last accessed: August 7.
- Canroll, R. C. (2001): Drugs in modern society. Bubuque, McBrowne Publisher
- Bells, A. P. (2006): Drug abuse, sports and homosexuality. New York, Simon & Schuster Press Ltd.
- Vioet, W. (2001): Breaking the chain: Drug and cycling; the true story, London: Fortheringham W. Trans.
- Tom, F. (2004, August 12): Medical notes on doping in sports. BBC News, Sports online, United Kingdom.