

AN ASSESSMENT OF PROHIBITED METHODS OF DOPING AMONG ATHLETES IN TERTIARY INSTITUTIONS IN SOUTHWEST, NIGERIA

O. B. AJAYI-VINCENT

*Department of Human Kinetics and Health Education,
Faculty of Education, Ekiti State University,
Ado-Ekiti, Nigeria.*

J. A. OLANIPEKUN

*Department of Human Kinetics and Health Education,
Faculty of Education, Ekiti State University,
Ado-Ekiti, Nigeria.*

Abstract

This paper investigated the prohibited doping methods adopted among athletes in tertiary institutions in Southwest, Nigeria. A descriptive design of the survey type was used for the study. Five hundred and ten (510) elite athletes in the tertiary institutions were sampled for the study from three states (Ekiti, Oyo and Ondo) in Southwest, Nigeria using purposive, simple and stratified random sampling techniques. Data were collected using an instrument titled 'Doping among athletes in tertiary institutions questionnaire'. The reliability of the instrument was 0.80 using Pearson's Moment Product Correlation method. The data collected were analyzed using frequent counts and percentages and the hypothesis raised was tested using Chi-square test at 0.05 level of significance. The study revealed that there was a significant difference among athletes in the doping methods adopted to improve their sports performances. The prominent method of doping used among athletes was by injection. This was followed by chemical manipulation, oral and blood doping. Based on the findings of this study, it was therefore recommended that there should be a restriction on the availability of prohibited substances and methods to athletes. The authorities concerned should facilitate doping controls, support programmes and provision of anti-doping education to the athletes and the community.

Keywords: Doping substances, Sportsmen and women, Athletes, Performance-enhancing substances, Drugs. Doping methods, Sports.

INTRODUCTION

In the area of sports development, doping as an illegal use of performance-enhancing substances has become a worldwide social problems among athletes. The use of prohibited doping substances using various methods among elite athletes represents a major threat to the existence, principle and practice of modern competitive sports (World Anti-Doping Agency Code, 2005). This also poses a greater threat to the development of sports ideals in the 21st century Africa and indeed the world. Athletes who dope create an uneven playing field for their peers who compete free of performance enhancing compounds using various methods regardless of the considerable health risks inherent in it.

Doping has so much become a topical issue in international sports that, it is no longer possible to mention international sports competitions without mentioning the use of drugs (Woolley, 2000). For many years, the various performance-enhancing substances and procedures or methods used offer an opportunity to gain that elusive competitive advantage. Cyclists, tracks and fields athletes, swimmers, and competitive weight lifters are among those athletic groups most often implicated in using banned or illegal substances or procedures to enhance physical

performance (Fricker, 2007; Frazer, 2009).

The prohibited drugs used in sports include psycho-active stimulants such as cocaine, heroin, amphetamine, anabolic steroids, stanozolol, hormones, diuretics, other masking agents and other related substances using blood or gene doping, enhancement of oxygen transfer, chemical and physical manipulations. The methods used by the elite sportsmen and women optimize the qualities needed for their sports on the basis of various physiological, biological and psychological factors. Blood doping often called red blood cell infusion or blood boosting gain public prominence as a possible ergogenic technique. For example, during the 1972 Munich Olympic, an athlete allegedly used this procedure prior to his two gold medals winning endurance runs (Timothy, 2006). Furthermore, it was reported that there was considerable evidence of doping irregularities from blood transfusion at 2008 Tour de France in order to gain unfair advantage in competition (Weiss and Laties, 2009). Blood boosting method of doping increases the red blood cells oxygen-carrying capacity. The red blood cells may have been drawn previously from the same individual or from a different donor (International Olympic Committee Medical Commission, 2006). The person's blood (donor) immediately re-infuses the plasma, and places the packed red blood cells in frozen storage for later infusion (antilogous transfusion) 1 to 7 days before an endurance event. This increases red blood cells counts and hemoglobin levels from 8% to 20% and contribute to a longer maximal cardiac output (IOC Medical Commission, 2006). Synthetic Report (2007) noted aerobic potentials of an athlete can be increased by increasing the blood's oxygen transfer capacity and eventually increase artificially running performance (Williams, 1994; World Anti-Doping Agency (WADA), 2005). Other methods used in doping include pharmacological, chemical and physical manipulations. This involves the use of substances and methods to alter urine sample (Tom, 2004). For example, an athletes can use someone else urine for his own urine sample and the use of epitesterone or bromatan. Athletes do this to hide the presence of doping substances in their urine. Other methods of doping include the use of intravenous injection and oral sniffing.

Perhaps, the use of these methods of doping exposes some of the potentials athletes to doping behaviour experienced in the early stage of their personality development and later affect their psychosocial life. For instance, social stigma and mental illness as sociological and psychological problems may begin to rear their ugly heads among athletes using doping substances through various methods. The fate of other athletes who wanted to win through their natural genuine physical efforts and hard work will definitely be at stake. Therefore, the present study investigated the doping methods adopted by elite sportsmen and women in Southwest, Nigeria because majority of the athletes in this zone are from tertiary institutions. This zone was also chosen because of the financial rewards for the winning athletes and the availability of modern sports facilities most especially in major towns in Ekiti, Ondo and Oyo states. All these really encourage young men and women in sports training programmes towards making themselves elite athletes, and perhaps at times under the influence of performance-enhancing drugs using various prohibited methods. The study therefore intends to address 'what prohibited doping methods are used by sportsmen and women in tertiary institution?'

Research Question

Is there any difference in the doping methods used among sportsmen and women in tertiary institutions?

Hypothesis

There is no significant difference in the methods of doping used by sportsmen and women in tertiary institutions.

Methods

The study adopted a descriptive research design of the survey type. The study sample consisted of five hundred and ten (510) active elites athletes (255 males and females respectively). They were selected using multistage and purposive, simple and stratified random sampling techniques. Nine tertiary institutions from the three states were selected using simple random sampling techniques. Three tertiary institutions that were regularly participating in either national or international sports competitions were randomly selected from each of the three states. Stratified random sampling technique was used in selecting the athletes considering sex (255 males and 255 females) and type of sports they participated in (individual, dual and team sports).

The sample for this study was drawn from those who represented their educational institutions at Nigerian Colleges of Education Games (NICEGA), Nigerian Polytechnics Games (NIPOGA), Nigerian University Games (NUGA) and West African University Games (WAUG) levels at least once. An instrument tagged "Prohibited doping methods Used by Athletes in Tertiary Institutions Questionnaire" was used to collect relevant data from the participants. The reliability coefficient of the instrument was 0.80 using Pearson's Product Moment Correlation Method. The instrument was administered to five hundred and forty (540) elite athletes while in the training programmes at their various training venues for various sports competitions at NICEGA, NIPOGA, NUGA and WAUG levels. Five hundred and ten (510) copies of administered instrument were duly completed and returned (representing 94.44% return rate).

Results

Research Question: What prohibited doping methods are used by athletes in tertiary institutions?

Table 1: Percentage analysis on the prohibited doping methods used by athletes in tertiary institutions
N=510

S/N	Doping Methods	Frequency				Total
		Male		Female		
		N	%	N	%	
1.	Injection	58	22.7	58	22.7	116(22.75%)
2.	Oral intake	54	21.2	42	16.4	96(18.82%)
3.	Blood doping	44	17.3	52	20.4	96(18.82%)
4.	Physical manipulation	37	14.5	29	11.4	66(12.94%)
5.	Chemical manipulation	41	16.1	68	26.7	109(21.37%)
6.	No response	21	8.2	6	2.4	27 (5.29%)

Table 1 above revealed that 58 (22.7%) male and female participants respectively used injection method of doping while 68 (26.7%) female participants used chemical manipulation. This proportion is greater than the proportion for the male counterparts. Only 54 (21.2%) male and 42 (16.4%) female participants respectively indicated their involvement in oral method of doping. Also 44(17.3%) male participants indicated their use of blood doping method while 52 (20.4%) female participants adopted the same method. Only 37 (14.5%) male participants adopted physical manipulation method of doping while 29 (11.4%) females used the same method. Only 21 (8.2%) male and 6 (2.4%) female respondents did not indicate the method they use.

Hypothesis 1: There is no significant difference in the methods of doping adopted by sportsmen and women in tertiary institutions

Table 2: χ^2 analysis on the doping methods used by athletes in tertiary institutions

S/N	Doping Methods	Sex		df	χ^2 -cal	v-2-	R
		Male	Female				
1	Injection	58	58	5	18.16	2.21	*Sig.
2	Oral intake	54	52				
3	Blood doping	44	52				
4	Physical manipulation	37	29				
5	Chemical manipulation	41	68				
6	No response	21	6				

P< 0.05 level of significance * Significance

The data in table 2 revealed the different numbers of sportsmen and women which used each prohibited method of doping. The chi-square analysis on the data revealed a significant difference (χ^2 -cal=18.16; χ^2 -tab = 2.21; DF=5 at 0.05 level of significance). Thus, the hypothesis was rejected. The interpretation of the significant difference is that sportsmen and women who used injection, chemical manipulation, oral intake and blood doping were significantly greater than those who used physical manipulation. However, there was a significant difference in the number of athletes who used injection, oral intake and blood doping methods.

Discussion

The analysis earlier revealed shows that athletes in tertiary institutions are involved in the use of different available and convenient prohibited doping methods to enhance their physical performances. The most commonly used methods of doping are injection, chemical manipulation, blood doping and oral intake. This study further revealed that the doping methods used actually have positive effects needed by them due to their quick reactions in their body systems towards improving their physical performances.

Findings of the study revealed that the oral intake of performance -enhancing drugs such as anabolic steroids, amphetamine, cocaine, heroin, morphine and even ibuprofen improve the athletes' extra strength, extra power, endurance and reduce fatigue (Vioet, 2001; UNESCO, 2005). The involvement of athletes in tertiary institutions in doping behaviors might be traced to the pressure from athletes' support personnel (team manager, physicians, trainers and coaches) towards keeping-up of their job status and make them popular.

From time immemorial, female athletes were late participants in the arena of sports. In attempt to bridge the gap, they have to search for methods of doping (chemical manipulation) more than their male counterparts. The exposure to mass media or advertisements, peer group interactions, the emergence of professionalism in various sports, an attempt to meet the high standard set to qualify and the monetary and material values attached to high performance in sports lure athletes to use various prohibited methods or procedures.(World Health Organization, 2002; Council of Europe, 2002).

A winning athlete under the influence of performance enhancing drugs using various prohibited doping procedures might attribute his or her victory to the drugs he or she had used

before the commencement of the event. However, sportsmen and women in this study were more convinced than the non-users that using various doping methods would improve sports performances. Despite the awareness, knowledge and effects of using doping procedures adopted for doping substances on athletes' health status and sports performance, they continue in this habit (The Council of Europe Working Party on Sports, 2002). It is viewed that the doping methods adopted strongly influence the life styles of the athletes. The prevalence of drug abuse, alcoholism, lateness to sports programmes and committing various anti-social acts among athletes such as raping, stealing sports equipment, quarreling, bullying and talking rudely to other athletes and athlete support personnel, disrespect to sports governing bodies and other constituted authorities might be attributed to their involvement in the use of psycho-active substances using various doping methods or procedures.

Conclusion

There was a significant difference among elite athletes in the tertiary institutions in their involvement in the various prohibited doping methods or procedures to enhance their physical performances in sports arena. The main doping method commonly used by the elite athletes was injection. Other methods were chemical manipulation, oral intake and physical manipulation. This motivated them to train with performance enhancing drugs very close to the real or main sports competitions.

Recommendations

Based on the findings of this study, it is therefore recommended that:

1. Athletes should be protected and have support network to help cope with sports related pressures and stress from team coaches, other athletes and athletes' support personnel.
2. There should be effective use of cognitive and behavioural strategies and educational programmes in reducing doping among athletes.
3. The integrity of sports participation should be highly emphasized rather than focusing on winning at-all-cost for monetary and material rewards.
4. All categories of athletes should be well educated on the consequences of doping in sports using various methods or procedures.
5. The authorities concern should restrict the availability of prohibited substances and doping methods to the athletes.
6. Doping control and support for successful national sports programmes should-be effectively facilitated by the government and other stakeholders.

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