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Full Length Research Paper

Significant influence of chronological age on doping behaviours of sportsmen in Nigeria

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The use of drugs in sports regardless of chronological age of sportsmen and women to gain an unfair advantage over opponents is not only repressive but dangerous to the health of the athletes. This study examined the extent to which the chronological age of elite athletes in Nigeria is closely connected to their use of doping substance s (ergogenic, psychoactive and multiple drugs). A total of 510 sportsmen and women from eleven popular sports in Nigeria were selected purposefully using simple and stratified random sampling techniques. A structured que stionnaire was used to collect relevant data for the study. The data collected were analyzed using de scriptive statistics and Analysis of Variance (ANOVA). Findings revealed that there was a significant influence of chronological age on doping behaviours of sportsmen and women in Nigeria . Significant relationship was not found with respect to age and sex interaction effect on doping behaviours of sportsmen and women. Researchers advised that athletes' support personnel should closely and purposefully monitor sportsmen and women in Nigeria during training se ssion to save Nigeria from embarrassment and disgrace being placed on countrie s whose athletes are caught using doping substance s.

Key words: Chronological age, correlate, elite athletes, doping behaviour, doping substanc es.

INTRODUCTION

The practice of sports involves physical health and fitness, dedication to training and proper nutrition. Doping which include the use of prohibited substances and methods to artificially enhance performance is unethical, it is contrary to the concept of fair play, it undermines the values of sports and endangers the health of athletes regardless of their chronological ages. Hence, the practice of doping by sportsmen and women is universally forbidden bec ause it has become a world-wide social problem (World Anti-Doping Agency (WADA), 2006; International Olympic Committee Medical Commission, 2007). The chronological age bracket of sportsmen and women is 14 to 37 and above. There is no doubt that Nigeria is a drug-oriented society using prescription drugs, over-the-counter medications and illegal s ubstances especially performance-enhancing substances (Mgbor, 1995).

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In the area of sports development, doping is considered illegal, and has bec ome a global social problem. This is as a result of the fact that sports have definitely become a big-time business with national and world c hampions making millions of dollars; enjoy self-esteem with national and international recognitions. Similarly, the growing tendency among athletes to use doping substances to pep-up their performance is due to the exposure of sportsmen and women to various sources of information and procurement of performance -enhancing s ubstances without age restriction. The monetary and material rewards awaiting the winning athletes and top sports handlers have really motivated them to doping behaviour. This has become a major menace to sports development world-wide.

It has been observed that sportsmen and women are involved in doping behaviours. Recent developments have proved that sportsmen and women of different age categories in Nigeria are no longer dope-free, especially from ergogenic and psychoactive substances/drugs because of their exposure to other nations through

Table 1. Chronological age as a correlate of doping behaviours of athletes.

Age of athletes	Performance-enhancing substances					
	Ergogenic substances		Psychoactive substances		Multiple substances	
	N	%	N	%	N	%
17-21	127	73.4	31	17.9	15	8.7
22-26	179	77.5	31	13.4	21	9.1
27-31	51	78.5	8	12.3	6	9.2
32-36	7	58.3	2	16.7	3	25.0
Above 37	10	76.9	2	15.4	1	7.7

international sports competitions (Narayanaswani, 1982; Chado, 1986). Mgbor (1995), Laure (1999) and Oshodin and Egor (2000) reported that Nigerian athletes, regardless of their ages, might not be totally free from doping behaviours. Similarly, Kurda (1995) and Vioet (2001) reported that a growing number of female athletes in top level international and collegiate sports contests exhibited doping behaviours.

In Nigeria, there were recorded cases of sportsmen and women of different age brackets who were tested positive to doping substances especially in weight lifting and athletics as reported by Oshodin and Egor (2000) and IOC Medic al Commission (2006) as Chioma Ajuwa, Daniel Phillip and Tina Ihengwa in 1992, Chidi Imoh in 1995 (tracks), Mary Onyali and Osmond Erinwa in 1996, and Beatrice Adient in 1997. Similarly, 'The Punch Sports', August 21, 2009 and 'The Nation', August 23, 2009 reported three Nigerian female athletes, Ogoegbunam Amaka, Vivan Chukwuemeka and Gloria Kemosode, who were involved in this shameful act of doping in the 12th IAAF world championship in athletics held in Berlin.

Furthermore, the Weight Lifting Federation of Nigeria (1995) conducted an in-house investigation into the weight lifters' involvement in doping behaviours. It was amazing that virtually all weight lifters of various age and weight categories were found with doping substances. This resulted in suspension of the drug cheaters such as Sapson Akpan, Ibik- biki, Lawal Ralwan, Moji Oluwa, and Sunday Ndubusi in 1995. However, the chronological age brackets of these doping culprits were not quite known. This paper therefore, investigated the extent to which age of sportsmen and women significantly correlate with their doping behaviours. In addition, the paper examined if there was any significant influence of chronological age on doping behaviours of sportsmen and women in Nigeria.

METHODOLOGY

A sample of 510 elite sportsmen and women was selected in five states in Nigeria using purposive, simple and stratified sampling techniques. The five states selected purposively were Edo, Abia, Lagos, Oyo and Kwara States. A total of 102 elite athletes were randomly selected in each State and later stratified, considering sex of the participants and chance of equal participation in the study. Fifty-one male and female athletes respectively were selected from each of the five States, thus, making a total of 510 participants selected for the study.

A structured questionnaire was used to collect data for the study. The instrument consisted of two sections (A and B). Section A consisted of items on the biodata of the participants, while Section B consisted of items related to doping substances used by elite athletes in Nigeria. A reliability of 0.79 of the instrument was obtained.

The instrument was administered to 510 elite athletes in their sports training centres/ state stadium during the sports training s essions (morning and evening) by the researchers. The researchers engaged the services of research assistants, while the researchers served as facilitators. The 510 copies of the instrument administered to the respondents were duly completed and returned, thus, making a 100% return rate. The data collected were analyzed using descriptive statistics and ANOVA at 0.05 level of significanc e.

RESULTS

Table 1 reveals that majority of the athletes in this study (73.3%) used ergogenic substances. Very few athletes (14.5%) used psychoactive substances, while fewer athletes (18.04%) were multiple substance users. The result revealed that irrespective of the substances used, younger athletes indulged in doping behaviour than older athletes. For instance, while 127 (73.4%) athletes within 17 to 21 years of age used ergogenic substances, 179 (77.5%) athletes within 22 to 26 years used ergogenic aids. Only 51 (78.5%) athletes within 27 to 31 years and 10 (76. 9%) athletes who were above 37 years us ed ergogenic substances. While 31 (17.9%) athletes within 17-21 age brackets and 31 (13.4%) athletes within 22-26 age brackets used psychoactive substances, only 2 (16.7%) athletes within 32-36 age brackets and 2 (15. 4) athletes above 37 years used psychoactive substances. Similarly, while 21 (9.1%) athletes within 22-26 age brackets used multiple substances, only 3 (25.0%).

Table 2. One-w ay ANOVA analysis show ing the degree of variability of chronological age on doping behav iours of sports men and w omen.

Source of variation	SS	Df	Ms	f-cal	f-tab	R
Between groups	36.40	4	9.1			
Within groups	4286.96	506	8.5	3.95	2.37	S
Total	4323.36	510	8.48			

p<0.05 level of significance.

Table 3. Tw o-w ay ANOVA analysis on the extent of doping behaviours by age and sex of athletes.

Source of variation	SS	df	Ms	f-cal	f-tab
Age (A)	2849.67	1	2849.67	12.92	3.84*
Sex (B)	1330.01	4	332.50	1.51	2.37
Two-way interaction (A and B)	726.41	4	181.60	0.82	2.37
Error term	10259.22	510	220.52		
Corrected total	116700.24	509			
Total	1246112.00	510			

p<0.05 level of significance (Not significant).

athletes within 32-36 years used multiple substanc es. The data showed that different numbers of athletes with each age bracket used specific performance-enhancing substances. For specific substance, the number of users decreased with age, with the largest number of users within 22-26 age brackets.

Table 2 reveals that F- calculated value of 3.95 was greater than F- calculated value of 2.37 at df = 4 and p < 0.05 level of significance. Therefore, there was a significant influence of chronological age on doping behaviours among sportsmen and women in Nigeria.

In order to examine whether there is any statistical significant interaction effect of age and gender on doping behaviours of athletes in Nigeria, a two-way ANOVA analysis was computed as presented in Table 3.

Table 3 s hows that F-calculated value of 0.82 was less than the F-calc ulated value of 2.37 at df = 4 and p < 0. 05 level of significance. Therefore, there was no statistical significant interaction effect of age and sex on doping behaviours of athletes. However, the effect of age on doping behaviours of athletes was statistically significant (F-cal = 12.92: F-tab = 3.82; p < 0.05).

DISCUSSION

The study revealed that chronological age would significantly influence doping behaviours among sportsmen and women. The accessibility or procurement of doping substances or other drugs has no age restriction. Athletes like other citizens in the society are exposed to various performance-enhancing s ubstances for use in sports competitions. Age as one of the demographic characteristics is known to influence doping behaviour of elite athletes as reported in the findings of Narayaswani (1982), Laure (1999) and Vioet (2001). This finding is consistent with the reports of Dubin (1990) and Handel (1998) that younger athletes within 17-26 years and above age brackets used doping substances.

Similarly, the report of Handel (1998) revealed that the great concern about doping behaviour has been directed to the young adult athletes within 17 -32 years and above age group. However, this habit of doping among elite athletes which appears to increase in the first ten years after the teenager period must have been developed during the teenage years. Further, these findings are also consistent with the present study, that younger athletes within 22-26 y ears age brackets were more involved in doping behaviour than the older athletes in their sporting activities.

It is interesting to note that athletes in this age group (22-26 years) are young ones with experience that may not cope with sports competitions that are becoming tougher. Their performance abilities at this age group may not be consistent with the widened selection base owing to the greater number of participants. Inability of the athletes in Nigeria within this age bracket to meet the techniques of selection, training requirements and adjustment to technical innovations may res ult in doping behaviours.

This finding revealed that there was no statistical significant interaction effect of age and sex in doping behaviour of elite athletes in Nigeria. One would have at least expect a significant interaction effect of age and sex similar to the studies of Narayas wani (1982): Levy (1997) and Vioet (2001). This study provided some insights into how age difference affects doping behaviour of elite

athletes in Nigeria. An individual athlete aims at winning at-all-cost in order to qualify for either monetary or material reward or honour attached to excellent performance. The information on doping s ubstances through mass media could easily attract young and inexperienced athletes towards meeting their targets within a short period, regardless of age categories as reported by Dore (1995), Horman (1996), Levy (1997) and Laure (1999).

This study revealed that age was positively associated with doping behaviour of elite athletes. This finding is not surprising since considerable research evidence abounds in the literature concerning age-related improvement in motor performance of athletes. However, there is no ruling-out the fact that the later elementary school years or training programme of elite athletes and the entire period of post-secondary years, together when span from 10 through to 18 years and above, are the most crucial years for comprehensive health education intervention programme on drugs in sports.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, it could be concluded that chronological age significantly influenced the doping behaviours of sportsmen and women. For specific doping substance used in this study, the number of users decreased with age, with the largest number of drug users in the age bracket of 22-26 years. There was no statistical significant interaction effect of age and sex on doping behaviours of athletes used in this study. However, the effect of gender on doping behaviours of athletes was significant. It is therefore recommended that:

1. The procurement of doping substances should not be made available for athletes regardless of the age and pressure from any authority.
2. Athletes' support personnel should closely and purposefully monitor sportsmen and women in Nigeria regardless of their age, maturity or experience during sports training sessions and actual sports contests.
3. Dope tests should be conducted for sportsmen and women at all levels (Local, State and National).
4. A comprehensive drug education programme for both the athletes and athletes' support personnel should be implemented at all levels of sports competitions.

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