

Effects of the Use of Stimulants in Attaining and Sustaining Peak Performance in Sports and Games in Ogun State Nigeria

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Abstract

In Nigeria today and Ogun State in particular, consumption of stimulant by athletes in attaining and sustaining peak performance in sports and games without the knowledge of the hazard caused to their health and performance skills. This may result into danger in physical, mental, social, emotional and peripheral nervous system of the athletes. Most available studies have focused more on the advantages of engaging in sports and games on individual's health than effects of the use of stimulants in sports and games. This study, therefore, investigated the perceived effects of the use of stimulant in attaining and sustaining peak performance in sports and games in Ogun State, Nigeria. Descriptive survey research design was used. Purposive sampling technique was used to select ten (10) sports and games engaged in at Dipo Dina International stadium, Ijebu-Ode. Simple random sampling technique was used to select One hundred and fifty (150) athletes across all the sports and games in the stadium. A self-structured questionnaire in Likert format was used to elicit response from the athletes with a reliability of 0.80. Three hypotheses were tested at 0.05 level of significance. Data were analyzed using descriptive statistics and chi-square analysis. The findings revealed that all the hypotheses were rejected, meaning that using of stimulants are significantly dangerous to physical, mental health and peripheral nervous system of athletes as perceived by participants. Based on these findings, recommendations were made on how to reduce, if not eradicate the use of stimulant in attaining and sustaining peak performance by athletes in sports and games in Ogun State, Nigeria.

Keywords: *Use of Stimulants, Athletes, Sport and Games, Ogun State.*

Introduction

In Nigeria today and Ogun State in particular, consumption of stimulant by athletes for attaining and sustaining peak performance in sports and games without the knowledge of the hazard it causes to their health and performance skills are on the increase.

Folawiyo, (1998) described drugs as chemical, natural or synthetic, that may alter the functioning of a person's body. Although the use of mind altering drugs is legitimate if it comes as a result of medical prescription. Medical uses of drugs include relief from pain inducement of sleep and removal of anxiety and tension.

Drug abuse is used to describe self-administration of excessive intake of stimulant drugs leading to tolerance, physical and psychological dependence mental confusion and their symptoms of abnormal behavior are the ground work of drug abuse which may often be established by the physician. However, many people seek drugs supplies from sources other than the physicians. Excessive use is likely to result in the user becoming wholly dependent on drugs to the exclusion of other values of life. Many dependent athletes take these drugs in lieu or add to alcohol while others follow the same procedure in search of paradoxical excitation and new thrill (Folawiyo, 1998).

The National Anti-drug strategies (2011) asserted that there are many risks to a person's body and mind from using drugs illegally. This situation and drug they use. Stimulant drugs such as cocaine or methamphetamine can increase an athlete's heart beat and blood pressure which could lead to stroke or even death. The drug can also cause convulsions, irregular heartbeat or cause an athlete to have trouble breathing while drug users can spread diseases such as hepatitis and HIV/AIDS by sharing needle and other drug items. National anti-drug strategy went further to state that use of stimulant the long term in results in athletes change in personality, learning problems loss of memory and can contribute to mental health problems.

All stimulants work by increasing Dopamine level in the brain. The brain dopamine is a brain chemical associated with pleasure movement and attention. The therapeutic effect of stimulants is achieved by slow and steady increase of dopamine, which are similar to the natural production of the chemical by the brain. The doses prescribed by physicians start low and increase gradually until a therapeutic effect is reached (National Institute of Drug Abuse, 2009).

Ophardt (2003) opined that the nervous system is composed of all nerve tissues in the body. The functions of the nerve tissues are to receive stimuli and transfer stimuli to nervous centers to initiate response. The peripheral nervous system, includes all nerves not in the brain or spinal cord and connects all parts of the body to the central nervous system.

The peripheral sensory nervous system receives stimuli, the central nervous system interprets them and then the peripheral (Motor) nervous system interprets and initiates responses. The use of stimulants has effect on the peripheral nervous system as follows: there is a decrease in the rate of degradation or diffusion from the receptor site.

More impulses are sent by the transmitter if it remains on the receptors site too long. Degradation is after each impulse terminates the neurotransmitters action. This may makes pupils dilate, nose becomes dry, there could be constipation and increase in pulse rate.

Statement of the problem

In most amateur and professional sports and games, athletes who win are those with the greatest strength, speed and endurance consistently performing with extra ordinary strength is the mark of an athlete/ player. Athlete strength is determined by the strength of the muscles and ability of the nerves to stimulate muscle contraction. Some athletes take food supplements and synthetic drugs to induce their bodies to build up more muscle. The toughness of the muscle you have, and the ability of your nerves to stimulate muscle contraction also play a big role in determining your speed. A large muscle mass allows you to generate more power which helps despite all the preaching and counseling, many athletes at all level of competition use pharmacological and chemical agents believing that a specific drug influence skills, strength , power and endurance in attaining and sustaining peak performance. Therefore this study was embarked upon to investigate the perceived effect of the use of stimulants in attaining and sustaining peak performance in sports and games in Ogun State, Nigeria.

Hypotheses

The following hypotheses were tested:.

- Ho₁:** Danger to physical health will not be significantly perceived as effect of stimulant use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State.
- Ho₂:** Danger to mental health will not be significantly perceived effect of stimulant use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State.
- Ho₃:** Danger to peripheral nervous system will not be significantly perceived as effect of stimulant use for sustaining peak performance in Ijebu-Ode Local Government area Ogun State.

Methodology

The study adopted the descriptive survey research design. The utilization of the design was hinged on the fact that it is suitable for gathering data from a relatively large number of cases at a particular time. The population of the study comprised all male and female athletes at Dipo Dina International Stadium in ijebu-Ode local government area of Ogun state at the time of camping when preparing for the National Sports festival competition. The sample was made up of one hundred and fifty (150) athletes selected through purposive and simple random sampling technique. It involved the selection of fifteen (15) athletes from each of the following sports and games: football, athletics, basketball, handball, hockey, volleyball, tennis, badminton, cricket and cycling. The research instrument was a close ended type designed in the format of Likert rating scale of strongly

disagreed, agreed, disagreed and strongly disagreed. The instrument was validated by three experts in Health Education and found suitable for the collection of data for the study. A test-retest method was used to test the reliability of the instrument and Pearson Moment Correction co-efficient was used to determine its reliability of 0.80. The questionnaire forms were self-administered among athletes of various sports and games at Dipo Dina international stadium, Ijebu-Ode in Ijebu Ode local government area of Ogun State. The analyses of the data collected utilized descriptive statistics of frequency counts and percentages as well as the Chi-Square inferential statistics set at 0.05 alpha level.

Results

The results are presented in tables 1-3 in line with the hypotheses tested.

Hypothesis 1: Danger to physical health will not be significantly perceived as effect of stimulant use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State.

Table 1: Chi-Square analyses on danger to physical health

Responses	Frequency	%	DF	Calculated valued	Table value	Decision
Positive responses	99	66	3	64.1	7.82	Rejected
Negative responses	51	34				
TOTAL	150	100				

$$\chi^2 = 169.6; df = 3; P < 0.05$$

Table 1 shows that ninety-nine athletes (99) representing 66% of the respondents positively responded to the claim that the use of stimulants would not be a danger to their physical health while fifty-one (51) athletes representing 34% of the respondent disagreed by not affirming the assertion. The calculated χ^2 value of 64.1 with $df = 3$ $P < 0.05$ is statistically significant when compared with the table value of 7.82, indicating that the null hypothesis 1 is therefore rejected.

Hypothesis 2: Danger to mental health will not be significantly perceived as effect of stimulant use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State.

Table 2; Chi-Square analysis on danger to mental health

Response	frequency	%	Df	Calculated value	Table value	Decision
Positive Responses	118	79	3	169.6	7.82	Rejected
Negative Responses	32	21				
TOTAL	150	100				

$$\chi^2 = 169.6; df=3; p<0.05$$

Table 2 shows that one hundred and eighteen athletes (118) representing 79% of the respondents positively responded to the claim that the use of stimulants would not be a danger to their mental health while thirty two (32) athletes representing 21% of the respondents disagreed by not affirming the assertion. The calculated χ^2 value of 169.6 with $df=3$ $p<0.05$ is statistically significant when compared with the table value of 7.82, indicating that the null hypothesis 2 is therefore rejected.

Hypothesis 3: Danger to peripheral nervous system will not be significantly perceived as effect of stimulant use for sustaining peak performance in Ijebu-Ode Local Government area Ogun State.

Table 3: Chi-Square analyses on danger to peripheral nervous health

Responses	Frequency	%	DF	Calculated valued	Table value	Decision
Positive responses	116	77	3	98.4	7.82	Rejected
Negative responses	34	23				
TOTAL	150	100				

$$\chi^2 = 98.4; df= 3 P< 0.05$$

Table 3 shows that one hundred and sixteen (116) athletes representing 77% of the respondent positively responded to the claim that use of stimulant substances would not be a danger to their peripheral nervous system while thirty four (34) athletes representing 23% of the respondents disagreed by not affirming the assertion. The calculated χ^2 value of 98/4 with $df= 3$ at $P< 0.05$ is statistically significant when compared that the null hypotheses 3 is therefore rejected.

Discussions

The first hypothesis which stated that danger to physical health will not be significantly perceived as effect of stimulant use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State was rejected. This indicates that the use of stimulants are dangerous to physical health of athletes when using drugs illegally, there are many risks to a person's body and mind. This result is in line with National Anti-Drug

Strategy (2011) report which stated that there are many risks to a person's body and mind from using drug illicitly. These risks are different depending on the person, situation and drug used such as cocaine or methamphetamine can increase a person's heart rate and blood pressure which could lead to strokes and death. These drugs can also cause convulsion, irregular heartbeat or cause a person to have trouble breathing. The second hypothesis, which stated that danger to mental health will not be significantly perceived as effect of stimulants use for sustaining peak performance in sports and games in Ijebu-Ode local government area of Ogun State was rejected. This indicates that the use of stimulants are dangerous to mental health of athletes, when taken in doses and routine other than those prescribed. The report of this study is in agreement with the National Institute of Drug Abuse (2009) report which states that stimulant work by increasing dopamine level in the brain. Dopamine is a brain chemical associated with pleasure movement and attention. The therapeutic effect of stimulants is achieved by slow and steady increase of dopamine which is similar to the natural production of the chemical by the brain. The last hypothesis which stated that danger to peripheral nervous system will not be significantly perceived as effect of stimulants use for sustaining peak performance in Ijebu-Ode Local Government area Ogun State was rejected. This indicates that the use of stimulants are dangerous to the peripheral nervous system of athletes when there is a decrease in the rate of degradation or diffusion from the receptor site, more impulses are sent by the transmitter if it remains on the receptors site too long.

The last result is in line with Ophrat (2003) who opined that the nervous systems composed of all nerve tissues in the body whose functions are to receive stimuli, transfer stimuli to nervous system and initiate response. The central nervous system, consist of the brain and spinal cords and serves as the collection point of nerve impulses. The peripheral nervous includes all nerves not in the brain or spinal cord and connects all parts of the body to the central nervous system. The peripheral nervous system receives stimuli, the central nervous system interprets them and the peripheral nervous system initiates responses.

Conclusion

In view of the findings of this study, the following conclusions were drawn:

1. Athletes in Ijebu-Ode local government area of Ogun State significantly perceive stimulants as dangerous to their physical health
2. Stimulants would significantly be dangerous to mental health
3. Stimulants would significantly be dangerous to peripheral nervous system of athletes.

Recommendations

The findings and conclusions of this study has prompted the following recommendations:

1. There should be proper examination of drug usage among athletes
2. Government should endeavor to place embargo on drug usage by athletes if it is not prescribed by physicians or mainly for illness,
3. Sport administrators and coaches should make sure that athletes remain drug free prior and during competition through close monitoring of athletes.

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