INFLUENCE OF DRUG USE ON ATHLETES' BEHAVIOUR DURING NIGERIA COLLEGES OF EDUCATION GAMES ASSOCIATION (NICEGA) IN NORTH CENTRAL GEO-POLITICAL ZONE, NIGERIA

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DEPARTMENT OF PHYSICAL AND HEALTH EDUCATION
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OCTOBER, 2011

DECLARATION

I hereby declare that this thesis was written by me and that it is a record of my own research work and has not been part of any presentation for any other higher degree. Writers whose quotations and work have been cited are dully acknowledged by means of references.

_____ _____

Ikwuka, Franca Nkoli Date

CERTIFICATION

This thesis entitled “Influence of Drug use on Athletes’ Behaviour During Nigeria Colleges of Education Games Association (NICEGA) in North Central Geo-Political Zone, Nigeria” by IKWUKA, FRANCA NKOLI meets the regulations governing the award of the degree of Master of Science in Sports Management of Ahmadu Bello University, Zaria Nigeria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This piece of work is dedicated to God Almighty who saw me through the period of this research work. May His name be glorified forever Amen.

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OPERATIONAL DEFINITION OF TERMS

The technical terms used in this study have been operationally defined as thus:

Drug: - Substances used by Athletes to improve performance in sports.

Doping - The use of performance enhancing drug by Athletes.

Athletes - People who take part in various sports.

Behaviour - Reaction of Athletes During Competitions

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ABBREVIATIONS

IOC	**-**	International Olympic committee
HIV	-	Human immuno-deficiency virus
NUGA	-	Nigeria Universities Games
NICEGA	**-**	Nigeria Colleges of Education Games Association
PCP	–	Phencyclidine
LSD	-	Lysergic acid diethylamide
DMT	–	Dimethyltryptamine
MDMA	–	Methylenedioxy – Methamphetaqmine
AIDS	-	Acquired immune deficiency syndrome
CNS	-	Central nervous system
PNS	-	Peripheral nervous system
REM	-	Rapid eye movement
HGH	-	Human growth hormone
HDL – C-		High Density Lipoproteins
BAC	-	Blood alcohol concentration
ADH	–	Antidiuretic hormone
RIA	–	Radio immunossays
MS	–	Mass spectrometer
HPLC	–	High performance liquid chromatography
UV	–	Ultraviolet
USOC	–	United States Olympic committee
WAD	-	World Anti-Doping Agency
WAUG	-	West Africa University Games
CGF	-	Commonwealth Games Federation

ABSTRACT

There has been tremendous increase in the number of participants in sports competitions. These sports competitions have imposed on the participants extreme pressures because of the desire to win at all costs by Coaches, Trainers, Spectators and even Athletes themselves. As a result of this quest, the problem of using drugs to enhance performance by Athletes has become the practice by both male and female Athletes in Nigeria. Some of these drugs taken by Athletes to enhance their performance not only influence their behaviours during sport competitions but also endanger their health. The incidence of drug use by Athletes is not only common with the developed countries of the world, but also found among the developing countries like Nigeria. It is not restricted only to the elite Athletes but also found in the institutions of higher learning during sports competitions such as NICEGA competitions. The purpose of this study was to assess the influence of drug use on Athletes' behaviour during NICEGA competitions in North Central Geo-Political Zone, Nigeria. Relevant literature such as journals, textbooks, magazines, and retrievals from the internet were consulted. The expost-facto research design was adopted for this study. The stratified random sampling technique was used to select the subjects for this study. The data collected were analyzed using SPSS and the statistical procedures used for the analysis were frequency and percentages which were used for the respondents' demographic variables. Means and standard deviation were used for the analysis of data collected on influence of drug use on Athletes' behaviour during NICEGA competitions. The one-sample t-test procedure was used to test the hypothesis because of the need to compare the observed means score with the fixed mean. The decision to accept or reject the null hypothesis was set at 0.05 alpha level of significance. The findings of this study showed that drug use by Athletes have significant influence on Athletes' behaviour, officiating, performance, health and incidences of conflicts among participants during NICEGA competitions. On the basis of these findings, it was recommended that the respective agencies responsible for the control of drugs in the Nigeria Colleges of Education during NICEGA competitions should not only concentrate on detecting drug use but also engage in an enlightenment campaign against it among prospective Athletes as drug use adversely influence the competitions.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The increasing incidence of drug use among youths including Athletes has been of growing concern to the Nigerian society, and indeed the world community. The fitness and skill levels of Athletes in different sports usually improve every year. Thus, boundaries of human athletic performance are continually extended, new records are established and the difference between success and failure becomes smaller in competitive sports. This ever decreasing difference between success and failure compels both Coaches and Athletes to search for any slight edge that might ensure success. In this search, many of them are tempted to use performance enhancing drugs, some of which can benefit performance while others endanger not only performance but also life. It was further reported that the use of drugs to enhance performance in sports is only the recent manifestation of an old problem. Ancient Greeks used stimulants to enhance performance (Venkateswarlu, 2000).

According to Fields (2004) Athletes have been using drugs to enhance their performance since ancient times. The use of drugs by Athletes is almost as old as the Olympic Game itself. He further reported that the pressures of professional athletics conditions and the accompanying lifestyle can create a situation in which Athletes seek both relief and the enhancement of performance by using alcohol or other drugs. Many high school College, and even professional Athletes are ill prepared for these pressure.

The career which leads to the top in sports is very demanding on the Athlete. It is no wonder therefore, that the Athletes sometimes are tempted to try shortcuts to reach the top. One of such shortcuts is the use of performance

enhancing drugs, often referred to as ergogenic aids. As a result, the joy and glamour often associated with fair play seem to be obscured by unholy chemical competitions. This has generated some concern, particularly at the Olympic Games and other International competitions, where security measures in doping control have become as important as organization with extremely high overhead costs (Haruna and Anugweje, 2005).

Orkula (2010) reported that the use of banned substances is a global problem that the World Anti-Doping Agency (WAD) has been grappling with in the last three or more decades. He explained that this ugly trend has ruined the careers of many world super and rising star Athletes like Marion Jones, Ben Johnson and a host of other foreign and local Athletes.

As a result of this increase in the incidence of drug use by Athletes world wide, the World Anti-Doping agency brought out the 2009 prohibited list of International standard. The list was target substances and methods prohibited at all times (in and out of competition). The prohibited substances include:

1. Anabolic Agents
2. Hormones and related substances
3. Beta-2 Agonists
4. Hormone antagonists and Modulators
5. Diuretics and other Masking Agents
6. Stimulants
7. Narcotics
8. Cannabinoids
9. Glucocorticosteroids

There are substances which are prohibited in particular sports. Such substances include Alcohol and Beta-Blokers (World Anti-Doping Agency, 2009).

1.2 Statement of the Problem

There has been a tremendous increase in the number of participants (male and female) in NICEGA competitions. These sports competitions have imposed on the participants extreme pressures, because of the desire to win at all costs by Coaches, Trainers and Athletes themselves. As a result of this quest to win, the problem of using drugs to enhance performance by Athletes has increased greatly in the world of sports, NICEGA inclusive. The use of performance enhancing drugs known as doping has become a regular phenomena by both male and female Athletes in Colleges of Education. This has generated some concern by NICEGA National Body. The researcher had over the years led Athletes to the Nigeria Colleges of Education Games. Association (NICEGA), such as Ilesha, 2005, Obudu, 2008 and Kano, 2010 where majority of the Athletes from various Colleges of Education exhibited some drug induced behaviours like violence, fighting, rebellion against the Local Organising Committee (LOC), rapism, smoking, drinking, vandalism, unprotected sex, aggressiveness, anxiety, inability to focus, depression, irritability, hooliganism and conflicts among the Athletes. Such behaviour disrupted the conduct of the competitions which led to inclusiveness of the competitions.

Other incidence of drug use among Nigerian Athletes was during 2008 Nigeria Colleges of Education Games Association (NICEGA), some male Athletes were decamped because they were caught drinking alcohol, smoking

cigarette and Indian hemp, and some were sniffing tobacco and assaulting the officiating officials. When these Athletes were interrogated, they all confessed that they took the substances for their boldness and stamina during the competitions. The behaviour of these Athletes disrupted the competitions at several intervals.

Drug abuse by the Athletes during NICEGA competitions has created so many problems that attributed to lack of success of both the Colleges where such Athletes come from and other participating Colleges. Hence their behaviour led to violence, indiscipline, hooliganism, assault on the officiating officials and even the accompanied staff to the competitions. As a result of this behaviour certain competitions were abandoned without been completed. These occurred during both pre-NICEGA and final NICEGA competitions. For example, in the just concluded Zone E Pre-NICEGA competitions which took place at Katsina State College of Education Isahkita, the behaviour of the footballers from some participating Colleges led to the incompletion of the competition. These behaviours are attributed to the influence of drugs.

These behaviours have become a matter of serious concern to the management of NICEGA competitions and the researcher. With these behaviours, the aims and objectives of NICEGA competitions are defeated. Therefore this research work was conducted to answer the following research questions.

1. Does the use of drug by Athletes in Colleges of Education influence their behaviour during NICEGA competition in North Central Geo-Political Zone, Nigeria?

2. Does the use of drug by Athletes in Colleges of Education influence the performance of Athletes in NICEGA competition in North Central Geo-Political Zone, Nigeria?
3. Does the use of drug by Athletes in Colleges of Education influence intercollegiate conflicts among participants in NICEGA competition in North Central Geo-Political Zone, Nigeria?
4. Does the use of drugs by Athletes in Colleges of Education influence the health of Athletes in NICEGA competition in North Central Geo-Political Zone, Nigeria?
5. Does the use of drug by Athletes in Colleges of Education influence the officiating of NICEGA competition in North Central Geo-Political Zone, Nigeria?

1.3 Purpose of the Study

The study has the following purposes

1. The study was intended to assist stakeholders such as Local Organising Committees, Institutions, Sports Associations, Administrators, Trainers, Coaches and Physical Educators in ensuring that Athletes in Colleges of Education desist from drug use in sports.
2. To determine if drug use by Athletes influence their behaviour during NICEGA competition.

1.4 Basic Assumption

The following statements of basic assumptions have been made for the study:

1. Drug use by Athletes could influence the behvaiour of Athletes during sport competitions.

2. Drug use could hamper Athlete's performance in sports.
3. Colleges of Education Athletes use drugs mostly during sports competitions.
4. Colleges of Education Athletes use drugs for enhancing their sports performance.
5. Drug use by Athletes could endanger their health.

1.5 Research Questions

1. Does the use of drug by Athletes in Colleges of Education influence theIr behaviour during NICEGA competition in North Central Geo-Political Zone, Nigeria?
2. Does the use of drug by Athletes in Colleges of Education influence the performance of Athletes in NICEGA competitions in North Central Geo-Political Zone, Nigeria?
3. Does the use of drug by Athletes in Colleges of Education influence intercollegiate conflicts among participants in NICEGA competition in North Central Geo-Political Zone, Nigeria?
4. Does the use of drugs by Athletes in Colleges of Education influence the health of Athletes in NICEGA competition in North Central Geo-Political Zone, Nigeria?
5. Does the use of drug by Athletes in Colleges of Education influence the officiating of NICEGA competition in North Central Geo-Political Zone, Nigeria?

1.6 Hypotheses

Based on the research questions and purpose of this study, the following major and sub-hypotheses were formulated.

Major Hypothesis

There is no significant influence of drug use on Athletes' behaviour during NICEGA competitions in North Central Geo-Political Zone, Nigeria

Sub – Hypotheses

1. There is no significant influence of drug use by Athletes in Colleges of Education on the performance of participants in NICEGA competition in North Central Geo-Political Zone, Nigeria

2. There is no significant influence of drug use by Athletes in Colleges of Education on incidences of conflicts among participants in NICEGA competition in North Central Geo-Political Zone, Nigeria

3. There is no significant influence of drug use by Athletes in Colleges of Education on their health during NICEGA competition in North Central Geo-Political Zone, Nigeria.

4. There is no significant influence of drug use by Athletes in Colleges of Education on the officiating of NICEGA Competition in North Central Geo-Political Zone, Nigeria.

1.7 Significance of the Study

The significance of this study are listed below:

1. It is hoped that this study would contribute to the advancement of knowledge in the area of Sports and Physical Education.
2. The study would be of immense value to future researchers who may like to study other variables which influence successful organisation of sport competition.

3. The result of this study will play a vital role in drawing the attention of the NICEGA National bodies, Institutions and Athletes themselves to the adverse effect of Drug use on the behaviour of Athletes during competitions.
4. The study would help to enlighten the Athletes on the dangers of drug use to health.

1.8 Delimitation of the Study

This study is delimited to the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) Competition in North Central Geo-Political Zone, Nigeria. The areas of coverage in the study included all State and Federal Colleges of Education in the North Central Geo Political Zone of Nigeria.

The following variables were studied for this research work:

- Athletes' behaviour
- Athletes' health
- Athletes' performance
- Conflict on Sports Competition
- Officiating of NICEGA Competition

1.9 Limitation of the Study

The student Athletes may conceal the information on drug use for the fear of possible sanctions. Therefore, the researcher would encourage the respondents to provide the necessary information without reservation as the information would be strictly kept confidential and used for academic purpose only.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The purpose of this study was to assess the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition in North Central Geo-Political Zone, Nigeria. To achieve this purpose available related literature have been consulted and reviewed under the following sub-titles in this chapter as follows:

1 Concept of drugs

2 Why people take drugs

3 Causes of drug use among Athletes

4 Classification of drugs commonly used by Athletes.

5 Effects of use of drugs on the health of Athletes

6 Incidence of drugs use among Athletes

7 Effects of drug use on Athletes' behaviour

8 Control measures of drugs use among Athletes drug users

9 Summary

2.2 Concept of Drugs

Drugs according to Pinger, Payne, Hahn and Hahn (1998) are referred to as any substance used as a medicine or as an ingredient in a medicine, that kills or inactivates germs or affects any body function or structure. They later explained that penicillin is an example of a drug that kill germs. Aspirin is an example of a drug that alters body function. A drug that alters sensory perceptions, mood, thought processes, or behaviour is known as a

psychoactive drug. Nicotine, alcohol, and marijuana are psychoactive drugs. Drugs may be legal (licit) or illegal (illicit).

Drug may also be defined as any substance, organic or inorganic used for medical purposes and which has the capacity to alter the state or functions of cells or organs. A drug therefore is a kind of chemical which produces some extra-ordinary effect beyond the life sustaining functions associated with food. Amuchie (1999) and Fields (2004) also defined drug as a non-food substance intended to affect the structure and function of the body, most often to diagnose, cure, mitigate, treat or prevent disease.

The term “Drug” is often used synonymously with the terms medications, therapies, treatment, medicine, therapeutics or medicaments. Generally speaking, drugs are substances that influence the function of the human body. Drugs are molecules (also called chemicals or compounds) that affect the body when they are ingested, inhaled, injected, or otherwise enter the body. Drugs affect the body by binding to other molecules in the body. To a medical doctor, drugs are either substances that are used as medication such as pain relievers, or substances used for recreation (Drugs of abuse) such as alcohol (Decostanzo, 2008).

2.3 Why People Take Drug

According to Amuchie (1999) people take drugs for various reasons. Some take drugs because they have one or more health problems. For this reason, they may resort to drugs believing that their problems will be solved. Others take drugs on experimental basis while some others take them for various social pressure and demand or for psychological reasons. He further reported that people take drug as a result of the following reasons:

1. Experimental Reasons:

Many people develop the drug habit through sheer imitation. They imitate their parents, friends, teachers and others. Some people drink and smoke to be in line with what obtains in their sub-group or family. For majority of drug users, the initial motivation is curiosity. They stopped probably because they did not enjoy the experience or gained nothing from the experience.

2. Psychological Reasons:

(a) Lack of identify: there are certain basic needs that every human being requires, such as food, clothing, security, love, feeling of acceptance, self image and self identify. In other words, every human being requires psychological and emotional fulfilment. All these are necessary for one to gain self esteem and to be competent in social, intellectual and physical skills. Whenever human needs are not met, a substitute is supplied. In this case some people use drugs at abusive levels.

(b) Apathy/failure: Apathy is a sense of defeat or failure which usually results in frustration. It could be as a result of acceptance or discrimination. Apathy and lack of identity are serious psychological factors in the use of drugs. If an individual has no place to turn to for assurance, he may turn to drugs in order to reduce his anxieties or as a means of escape from problems.

3. Social Reasons:

(a) Social Alienation: is a common social problems many youths face. This refers to the isolation of an individual or group of individuals from the dominating society or his subgroup. A lot of young people are dissatisfied or disillusioned with the prevailing system. Since they are a

population minority, they become socially alienated. Members of the group influence others and are in turn influenced until the general actions and attitudes are uniform and there is compliance among the group. It is in this situation that peer pressure is clearly observed. A person who is easily subjected to peer pressure may also have a deeper problem. If there is no solution to his problem he resorts to drug taking. There are some indices of social alienation which include poverty, bribery and corruption, prostitution, severe physical and mental disability and frustration as a result of failure. These are social ills which are capable of causing or leading to social alienation. People with these social tendencies are usually unable to have a sense of belonging since these tendencies are not regarded as normal behaviours in the society.

(b) **Lack of adequate parental guidance and control**: Many people today turn to drugs because of the fast decreasing primary social controls like lack of adequate parental guidance and control, fast disintegrating extended family system, broken homes, and decrease in secondary social control, especially the weakening of the school – community relations, laws, customs, and traditions and also through the rapid socio-cultural changes, rural and urban migrations and mounting waves of unemployment. Drugs are sometimes used to enable the user to rebel against the authority.

Pleasure:

(c) Progress, specifically, advancement in space and age or technology, has created more leisure time. Unfortunately, some individuals do not know how to use such free hours in meaningful activities. Though they

are bored, yet they are reluctant to use their energy or creativity to pass the time. Instead, they search for fun and pleasure or relaxation by using drugs. The use of drugs for pleasure motivation can be classified into two, namely: drugs for pleasure and drugs as pleasure. Drugs for pleasure is the use of drugs at social gatherings. In this situation, the objective is a successful social affair. Examples of drugs used to achieve this end are wine, kolanuts, cigarette, Champaign, whisky, palm-wine, burukutu and assorted types of beer. On the other hand, drugs may be used as pleasure. When drugs are taken just for the effects, that is, the pleasure they produce in an individual. There is a time limit to the effect of any drug. When one takes a drug for pleasure or excitement, when the effect is over, the person returns to the former level such that it becomes necessary to repeat the drug in order to maintain the needed sense of excitement. When the need becomes compulsive, it stops being social or recreational.

(d) **Social pressure and demand**: There are certain social expectations which youths and adults are expected to fulfil. Persons who are of age are expected to marry and raise children. Certain civil responsibilities and service such as paying taxes and contributing to the provision of social amenities are some other social expectations. The society also requires youths and adults to exhibit a high sense of honesty, loyalty and obedience to the society. Where these expectations are not met, youths believe that taking drugs could produce extra energy or exertion to undertake within a short time a job that ought to be done in a longer time, and without really feeling the adverse effect of the job. They

believe that the physiological functions of the system will be enhanced by taking drugs.

4. Economic reasons:

Another element that has added new dimension to youth taking drugs is the fact that drug trafficking has become a very lucrative trade. It is so lucrative that even the stiff penalties imposed by the Federal Government have particularly failed to stem the tide or reduce the rate of abuse among adolescents. Some drug dealers, including women, even go the extent of putting the stuff in their stomach or private parts in an attempt to deceive vigilant security and custom officials.

5. The effects of the mass media:

Today's mass media such as the newspapers, magazines, the radio and the television are used for various purposes. Many types of drugs are advertised. Some television programmes are used to promote and advocate the use of certain drugs. There are various advertisement over the media, such as Guinness is good for you; "Star makes you brighter" and "Golden Guinea puts new life in you" When youths come across such programmes, they are encouraged to believe that they are socially acceptable. This may form another important reason why people take drugs.

6. Religious reasons:

Another motivating force for drug use is self transcendence, that is, the search for the meaning of life and reason for one's existence. Certain people and religious orders tend to use mind affecting drugs to probe the question of life, man's role in the universe and the power that controls the universe. In addition, churches use wines to serve communions, although they are used

occasionally and in small quantities, but repeated use may compel people to take to drugs. People may also misinterpret the practice and resort using alcohol. Traditional religion also call for the use of certain drugs during rituals. This may also be another reason why people take drugs.

Moronkola and Otinwa (1999) reported in their work that there are so many reasons behind people's misuse and abuse of drug generally. Some of the reasons include loneliness, curiosity, experimentation, to be bold, to be calm or relax, to feel good, peer pressure, pleasure, religions obligations, sign or maturity and state of health.

They further stressed that the use of drugs to alter consciousness is nothing new. It has been a feature of human life in all places on the earth and in all ages of history. He stressed that to his knowledge, the only people lacking a traditional intoxicant are the Eskimos, who had the misfortune to be unable to grow anything and had to wait for white men to bring them alcohol. He continued to stress that alcohol, of course, has always been the most commonly used drug simply because it does not take much effort to discover that the consumption of fermented juices produces interesting variations from ordinary consciousness. They also explained that many theories have been put forward to find out why people take drugs and why some people are taking some drugs that we disapproved of. He stated that people are taking drugs to escape, to rebel against parents and other authorities, in response to tensions over foreign war or domestic crises and also in imitation of their elders, also the desire to alter consciousness periodically is an innate, normal drive analogous to hunger or the sexual drive. Drugs are merely one means of satisfying this drive (Amuchie, 1999).

2.4 Causes of Drug use among Athletes

Sports have became phenomenally popular worldwide. Athletes frequently use ergogenic aids to improve their performance and increase their chances of winning in competition (Silver, 2001). Ergogenic aid according to Silver (2001) is defined as any means of enhancing energy utilization including energy production, control and efficiency. He further described an ergogenic aid as any means of enhancing energy production and utilization.

Ergogenic aids have been classified into five categories: Mechanical aids, such as lightweight racing shoes, Psychological aids, such as hypnosis, Physiologic aids, such as blood doping, Pharmacologic aids, such as androgenic steroid supplements and Nutritional aids, such as creatine supplementation. Erogenic aids can be specifically tailored to enhance performance in a particular sport. For example, some Athletes involved primarily in strength-dependent activities, such as weight lifting, use anabolic steroids to increase muscle mass. Some endurance Athletes such as marathon runners, use blood doping to increase their oxygen-carrying capacity (Silver, 2001).

Worsnop (1991) explained that Athletes like other people take drugs for a variety of reasons. Recreational use covers all those occasions when drugs are taken to “get high” or “have fun”. Drug use for the purpose of pain relief also is widespread among Athletes, virtually all of whom suffer injuries of some sort during their careers. The ability to “play hurt”, much prized by Coaches and Fans, is often reinforced by painkillers and tranquilizers. In most cases, Athletes take drugs for performance enhancement. This can mean a number of different things, depending upon the sport. Weightlifters. Bodybuilders and

Football linemen want to put on more muscle; Sprinters want to make a more explosive start out of the blocks. Cyclists and Long distance runners seek greater endurance. Some performance enhancing drugs are effective only if taken shortly before the beginning of the athletic contest. Other performance enhancers serve mainly as training aids. By helping muscles to recuperate more quickly from exhaustion or injury, these substances enable users to train for longer periods of time at high intensity. Drugs are used by Athletes to soothe pain, relieve anxiety, help to sleep, keep awake, lose or gain weight. For many problems, people rely on drugs rather than seeking alternative coping methods. It is not surprising that athletes tend to adopt similar attitudes (Worsnop, 1991). He further reported that Athletes may also turn to drugs to relieve stress generated by the conflicting demands of sports competition and ordinary life. People boosting their egos surround Athletes and tell them they are invulnerable to the ordinary pressures we all face. An Athlete has to deal with the disjunction between the outside world, which says they are exceptional, and what they feel inside, which is, they are just as human as the rest of us. Still, the nature of sports competition proves the main reason for Athletes to turn to drugs.

Pinger et al (1998) stated that Athletes searching for a competitive edge, body builders looking for a quick way to increase muscle mass and teenage boys wishing to hasten their physical development are among those tempted by anabolic drugs. In the nineteenth century, it was reported that unscrupulous Athletes sometimes put laudanum (opium) in their opponent's drinks in order to impair their performance. In more recent times, with the advance of medical

science, some Athletes have used drugs, not one their opponents, but on themselves in order to enhance their own performance (Yuen, 2000).

2.5 Classification of Drug Commonly used by Athletes

Athletes have been using drugs to enhance their performance since ancient times. The use of drugs by Athletes is almost as old as the Olympic Game itself (Fields, 2004). Drugs in sports are more than just anabolic steroids and the deliberate use of drugs or substances to improve performance. It also involves medications used to treat illness and injury and the use of social drugs such as alcohol and tobacco. Drug use in sports also includes the consumption of alcohol by spectators and the need for smoke free areas (Yuen, 2000).

There are various classes of doping agents commonly used by Athletes in both National and International competitions, such as:

(a) Stimulants

(b) Narcotics

(c) Anabolic steroids

(d) Beta Blockers

(e) Diuretics

(f) Peptide Hormones and analogues.

These doping agents were banned on the 1989 list of the International Olympic Committee (IOC). In addition to these agents, methods or procedures, which include blood doping, and pharmacological, chemical, or physical manipulations (like urine substitution, are banned. The use of certain drugs is permitted subject to restrictions. These drugs include alcohol, marijuana, local anaesthetics, and corticosteroids (Venkateswarlu, 2000).

One may ask questions such as, why is there so much concern over drug use by Athletes. Why not focus on drug use by clarinet players, muffler repair people or other categories of people? There are several answers to these questions, and together they demonstrate that there are special reasons to be concerned about drug use in sport. Firstly, there are those well known Athletes who are seen as role models for young people, portraying youth, strength and health. When a famous Athlete is reported to be using cocaine or some other illicit substances, there is concern that impressionable young people will see drug use in a more positive light. After all, haven't corporate sponsors paid these Athletes to endorse their products? (Oakley and Charles, 2004).

Secondly, some of the drugs used by Athletes are intended to give the user an advantage over the competition, an advantage that is clearly viewed as being unfair. This is inconsistent with out tradition of fair play in sports, and wide spread cheating of any kind tends to diminish a sport and to diminish public interest in it. Professional wrestling, for instance, which is widely viewed as being rigged or staged, is enjoyed more as a form of comic entertainment than as an athletic contest. Most professional and amateur sports – people guard their honour carefully, and the use of performance enhancing drugs is seen as a threat to that honour (Oakley and Charles, 2004).

Thirdly, there is a concern that both the famous and the not so famous Athletes who use drugs are endangering their health and perhaps their lives for the sake of a temporary burst of power or speed. To the extent that there are risks associated with the use of these drugs, Athletes should be aware of those risks. Because these drugs are often obtained illicitly, we can assume that the

providers of the drugs do not present a balanced cost/ benefit analysis to the potential user but, instead, probably maximize any possible benefit and minimize the dangers (Oakley and Charles, 2004).

2.6 Effects of Drug use on the Health of Athletes

Today, drug use in sport has reached enormous proportions in society and is adversely affecting sports. Nowhere is the problem more serious than in professional athletics where Athletes, Coaches and Trainers misuse drugs in search of ways to improve performance. Many Athletes fail to take their time when making the decision whether to use drugs to their advantage. Unfortunately Athletes may use drugs for the treatment of illnesses, therapeutic indications, recreational or social reasons, as muscular aids or to mask the presence of other drugs during drug testing. By doing this, the safety of the Athlete's health is being neglected. Drug use has led to an increased number of deaths and suspensions of Athletes (Yuen, 2000).

Worsnop (1991) reported that drug use among Athletes has gone dramatically up in recent years. Athletes also are becoming more venturesome about mixing different types of drugs. One reason is that new drugs keep coming on the market, and some turn out to be of help in giving Athletes a competitive edge. Sports officials feel they have no choice but to try to combat drug use in sports with every legitimate weapon at their command. They are motivated in part by concern for Athletes' well being. He explained also that most performance enhancing agents have side effects that can pose an immediate or long-range threat to health, but the officials are driven by self-interest too. Nearly all drugs used in organized sports have potentially serious

side effects. Some Athletes decline to use them for that reason, but other Athletes take these drugs with little or no hesitation.

Stimulants: These include substances that increase central nervous system activity. They increase heart rate, induce wakefulness, reduce fatigue, elevate mood, and produce euphoria. These powerful drugs grew in popularity in the 1980s and while their abuse has declined some-what, they remain popular in the late 1990s. These drugs include amphetamines, cocaine and Cathinones (Pinger et al, 1998). Oakley and Charles (2004) reported that during the 1800s and early 1900s, three types of stimulants were known to be in use by Athletes. Strychnine, which became famous as a ratpoison, can at low dose act as a central nervous system stimulant. However, if the dose is too high, seizure activity will be produced in the brain. The resulting convulsions can paralyze respiration, leading to death; at least some boxers were reported to have used strychnine tablets. This might have made them more aggressive and kept them from tiring very quickly, but it was a dangerous way to do it.

Stimulants constitute a variety of drugs to increase alertness and reduce fatigue. It was reported that in the history of Olympics, many stimulants, like amphetamines, caffeine, and cocoa leaves have been used. When doping centre was first introduced, stimulants like the amphetamines were the most problem drugs in sports. Unlike anabolic steroids, which are used in training, stimulants are consumed on the day of competition. As effective methods of detecting these drugs have been developed, their use been drastically reduced. The stimulants that are detected most frequently are drugs that can be used inadvertently, like ephedrine used in the treatment of asthma (Venkateswarlu, 2000).

Amphetamines and related agents produce dose dependent effects on the central nervous system and other bodily systems. At low dosages, they increase alertness, cause euphoria and decrease fatigue. However, at higher doses, they tend to produce abnormal motor acts, like repetitive movements, they are used medically for reduction in pain sensitivity, and sleeplessness, reduce sleepiness and appetite. They tend to increase blood pressure, peripheral vasoconstriction which can lead to increased body temperature and reduced fluid intake, when coupled with increased motor activity (Laverty, 1990 and Venkateswarlu, 1996)

Fields (2004) in his work reported that amphetamines have an appetite suppression effect attractive to a variety of Athletes for whom making and keeping a required weight is essential (example. jockeys, gymnasts, wrestlers, and boxers). He further reported that approximately 75 percent of trained swimmers, weight lifters and runners showed improvements in performance after administration of amphetamines. A review in 1981, using criteria based on knee extension strength and running to exhaustion, showed that performance usually improved by only a small percentage. However, in highly competitive sports, even a one percent improvement can mean the difference between victory and defeat (Fields, 2004).

Fields (2004) also reported that amphetamines have both major and adverse effects on human body, such as:

Major effects: Typical therapeutic doses of amphetamines stimulate the central nervous system, increase blood pressure, widen the pupils, increase respiration rate, depress the appetite, relieve sleepiness, and decrease fatigue and boredom. Other effects include increased awareness and alertness, slight

euphoria, elevation of mood and self confidence (although the ability to perform complex task is usually diminished), increased talkativeness and excitement, reduced nausea and gastrointestinal upset, and dry mouth.

Adverse effects: In some individuals, even a moderate dose of amphetamines can have adverse effects, such as agitation, an inability to concentrate, anxiety, confusion, blurred vision, tremors, and heart palpitations. Higher doses of amphetamines can produce quite severe adverse reactions, which include the following:

- Tremors, palpitations
- Dilated pupils (Mydriasis)
- Sweating and flushing, abdominal cramps, nausea.
- Tachycardia (rapid heart beat), heart abnormalities.
- Hypertension (Later hypotension), circulatory collapse.
- Anxiety, agitation, and panic
- Aggression and violent behaviour often associated with paranoia
- Rapid breathing, respiratory collapse
- Hallucination (Visual and auditory), delirium.
- Extremely high fevers.
- Convulsions and seizures

Although death reports from amphetamine use are rare, some individuals who are usually sensitive to these drugs have died as a result of burst blood vessels in the brain, heart failure, or high fever. Amphetamine psychosis, a mental disturbance similar to paranoid schizophrenia, is sometimes associated with high dose amphetamine use, but many of its symptoms have been observed with moderate dose levels.

Injecting amphetamines causes other complications: unsterile and shared needles cause problems with tetanus, Aids, abscesses, and hepatitis (Fields, 2004)

Venkateswarlu (2000) reported that available recent research evidence suggests that amphetamines can enhance skilled athletic performance, specifically speed, power, endurance, concentration and fine motor coordination. He explained that field experience tends to show that the use of amphetamines is inherently dangerous as deaths in international competitions have often been attributed to excessive use of amphetamines. He emphasized that, as amphetamines increase heart and blood pressure, they impose much greater stress on the cardiovascular system of the users and thus can trigger cardiac arrhythmias. Instead of delaying the onset of fatigue they may most likely delay the sensation of fatigue, enabling the Athletes to perform dangerously beyond normal limits to the extent of experiencing circulatory failure.

Caffeine, nicotine and alcohol are stimulants that are socially accepted drugs of dependence. Caffeine produces a mild central stimulation, similar to that of a low dose of amphetamines. It also causes increased heart rate, cardiac output, metabolic rate, and urine production. However, at high doses, it causes tremor, nervousness, anxiety and insomnia. When an individual stops taking this drug, he may experience withdrawal reaction, irritability and headache (Venkateswarlu, 2000).

Caffeine is present in many social beverages, like coffee, teas and cola drinks. Because of its euphoriant properties, it is often used to improve motor performance. However, relatively high doses (400mg) are required to produce

very slight effect in reducing fatigue, and even produce hand tremor (Weise and Laties, 1996).

Weise and Laties (1996) also stated that cocaine is the primary psychoactive substance found in the leaves of the cocoa plant. It is a powerful stimulant which is banned in most countries. Historically, it was used by the Incas of South America to reduce fatigue and exhaustion. They further reported that cocaine use has both physiological and psychological effects on human body, such as:

Physiological Effects: Cocaine affects both the peripheral nervous system (PNS) and the central nervous system (CNS). Although cocaine's acute effects are highly stimulatory, they are very brief. The chronic physiological effects can result in serious medical complications and death.

Acute Effects – Cocaine's effects on the sympathetic nervous system include an increase in respiration and heart rate and a loss of appetite. Heartbeats may be irregular and extremely rapid. As blood vessels constrict, blood pressure and body temperature rise. The rise in blood pressure may cause hemorrhaging or congestive heart failure. Other symptoms include sweating and a pale appearance. Cocaine's effects on the voluntary branch of the Peripheral Nervous System (PNS) include increased motor activity but no increase in physical strength or improvement in coordination. Its effects on the Central Nervous System (CNS) include euphoria, increased alertness and mental awareness, and a corresponding reduction in fatigue. At exceedingly high doses, convulsions and seizures may occur.

Chronic Effects – Cocaine abusers experience a number of undesirable side effects associated with chronic abuse which includes dizziness, irregular

heartbeat, sleeping disturbances, nasal burns and sores, chest pains and coughing. Although cocaine is touted as having aphrodisiac properties, chronic abuse can actually lead to impotence and loss of sex drive.

Psychological Effects – Cocaine produces acute and chronic psychological effects that are similar to those produced by amphetamines. Reported feelings range from euphoria and exhilaration immediately after administration to anhedonia (inability to experience pleasure) and depression as the drug is eliminated. Chronic cocaine abuse can produce psychological disturbances, such as irritable and violent behaviour, depression, confusion, impaired thinking, anxiety, paranoia, memory loss, cocaine psychosis, hallucinations, and suicidal tendencies.

Narcotic and other analgesics

The term narcotic comes from the Greek word narkosis, which means to numb or to be in a stupor. Analgesia means to relieve pain, without producing unconsciousness (Fields,2004). Narcotic and other analgesics according to Venkateswarlu (2000) are drugs to relieve pain. Narcotic analgesics, like morphine are powerful but have adverse effects and should therefore be used carefully. In sports, they are used on the day of competition and therefore are readily detectable. Non narcotic drugs, like aspirin, are very mild drugs. In sports, narcotic analgesics are banned. However, there is no restriction on the use of non-narcotic analgesics.

Pinger et al (1998) reported that narcotics or narcotic analgesics are drugs that relieve pain and produce sedation. The word narcotic comes from the Greek word narke, meaning numbness or stupor. The term opioid, or opioid analgesics, is also used to describe this group of drugs including natural

narcotics, which are derivatives of opium, quasi-synthetic narcotics, made by chemically altering natural opiates and synthetic narcotics, opiate like drugs manufactured by drug companies. Narcotics are true analgesics, that is, they relieve pain without producing sleep. Some of the narcotic analgesics are counted among the most powerful and useful medications available. However, they are also among the most deadly of abused substances. Those who become dependent on these substances risk death from overdose and from infection with potential fatal diseases, such as hepatitis and AIDS.

Pinger et al (1998) further stated that narcotics have both physiological and psychological effects on human body, such as:

Physiological effects: Narcotics produce their most pronounced effects on the Central Nervous System (CNS), however, they also influence the Peripheral Nervous System (PNS), particularly the smooth muscles of the intestinal tract and the eyes. Both acute and chronic physiological effects of narcotics occur as:

Acute effects: Narcotics produce analgesia, euphoria, drowsiness, and depression of mental faculties. They do not depress motor activity or cause the slurring of speech to the degree that alcohol and barbiturates do, but they do depress respiration. Opiates appear to reduce the sensitivity of the brainstem to levels of carbon dioxide that may be building up in the body. At high doses, breathing becomes irregular and slow. The primary cause of death in cases of narcotic overdoses is respiratory arrest. In this regard, narcotics are the leading cause of deaths from unintentional drug poisonings. Other undesirable effects of narcotics include constipation, stimulation of the “vomiting center” in the medulla, and suppression of rapid eye movement (REM) sleep. Since REM

sleep is associated with memory formation, narcotics are detrimental to this physiological process. The specific depression of the cough centre of the brain also occurs, and this is regarded as a therapeutically desirable effect of opiates. Codeine is the narcotic that is most effective as an antitussive (cough suppressant).

Chronic effects: The following are the major effects of narcotics: pain relief (analgesia), euphoria (sense of well being), cough suppressant (autitussive), respiratory depression, sedation or drowsiness, constriction of the pupils (Pinpoint pupils), nausea and vomiting, itching and decrease in gastrointestinal activity (constipation) (Fields, 2004).

Psychological effects: The psychological effects of narcotics vary with individuals, their moods, and social or environment settings. As with the physiological effects, both acute and chronic psychological effects of narcotics occur.

Acute effects: Acute effects of narcotic use can be observed outwardly as a behavioural pattern of lethargy, lack of concern and inability to concentrate. Inwardly, users report peacefulness, feelings of well being, and even euphoria. Others, especially intravenous users, describe the rush in sexually pleasurable terms, followed by the sensations. These highs last only a short time, however, and are followed by a period of increasing anxiety. Because tolerance develops, those who continue to abuse the drug are invariably disappointed in their attempts to repeat the same high level of pleasure achieved in earlier usages.

Chronic effects: The existence of psychological dependence as evidenced by craving, is well established for narcotic use. The user's mood and the social or

environmental settings in which the drug is taken are important in the establishment of psychological dependence in intravenous drug users.

Fields (2004) highlighted some of the effects of narcotics when the users want to withdraw as appetite suppression, nausea and vomiting, dilated pupils, gooseflesh, or increased phylomotor activity, restlessness, intestinal spasms, abdominal pain, muscle spasms, kicking movements, occasional diarrhea, increased heart rate and blood pressure, chills alternating with flushing and sweating, irritability, insomnia, violent yawning, severe sneezing and runny nose, crying and tearing, nasal inflammation, depressive mood and tremor.

However, chronic use of opiates, especially heroin, results in a variety of obstetrical compromises. Because withdrawal in an addicted mother may lead to spontaneous miscarriage, the consensus of the medical community to date is to stabilize the heroin addicted mother on methadone during the pregnancy. However, these babies tend to be born prematurely, with a lower birth weight. Born addicted, these babies may display withdrawal symptoms and have significant neonatal difficulties, with lifelong negative effects on psychomotor development (Fields, 2004). Mild analgesic drugs, including aspirin, are non steroidal anti-inflammatory drugs, because they act mainly to reduce inflammation. These drugs are believed to inhibit enzymes causing the production of very active derivatives, called prostaglandins, from fatty acids of the damaged region of cell membrane. These oxidized fatty acids are potent stimulators of factors involved in tissue repair. They are also active on blood vessels, nerves and in the central nervous system, producing vasodilation, pain and fever. Inhibition of their production relieves pain and reduces swelling and fever in tissue damage and infection. They also exert protective effects in the

stomach by neutralizing the effect of the acid gastric secretions on the stomach wall, (Venkateswarlu, 2000).

Anabolic Steroids: These are performance enhancing drugs that include two types of compounds: anabolic – androgenic steroids (hereafter referred to simple as steroids), which are synthetic compounds that mimic the action of the male hormone testosterone, and human growth hormone (hGH), a protein produced by the human pituitary gland. These compounds can be considered performance enhancing because they accelerate the rate at which the body builds protein; thus, they increase muscle size and strength and promote muscle - injury repair among athletes who use them. Both types of anabolic drugs are legally available only with a physicians or veterinarian's prescription. Most of the illicit anabolic steroids available in the United States are smuggled into the country. Some of the most commonly encountered are boldenone (Equipoise), ethylestrenol (maxibolin), fluoxymesterone (Haloestin), methandriol, methandrostenolone (Dianabol), methyl-testosterone, nandrolone (durabolin, Deca-Durabolin), oxandrolone (Anavor), oxymetholone (Anadrol), stanozolol (Winstrol), testosterone, and trenbolone (Finajet) (Pinger et al; 1998).

Steroids are class of lipid molecules that contain four carbon rings with various attached side chains of chemicals. Examples include cholesterol, cortisol, and aldosterone. Some of these steroids, such as hydrocortisone, have important medical uses either in replacement therapy for adrenocortical deficiency or for their potent anti-inflammatory effects in disorders of many organ systems. Two important steroids are the female hormone estrogen, produced in the ovaries, and the male hormone testosterone, produced in the

testes. These two hormones have only small chemical differences but large differences in their effects on growth and development. Steroids also can be produced synthetically. Synthetic steroids that produce testosterone like effects are called androgenic steroids because they cause the expression of male secondary sex characteristics, including a deepening of the voice, growth of facial and body hair, and increased aggressiveness. They are also called anabolic steroids because they stimulate protein synthesis, resulting in increase in muscle size and strength (Pinger et al, 1998).

According to Pinger et al (1998) anabolic androgenic steroid use causes several physiological and psychological changes. Some of these changes begin immediately, but others normally appear only after long term use. Some of these changes are temporary and others are permanent. They further reported that anabolic androgenic steroids have both physiological and psychological effects on human body, such as:

Physiological Effects

The physiological effects of using anabolic androgenic steroids are increased weight and muscle mass, increased water retention, and decreased body fat. Researchers recently demonstrated in a carefully controlled study that "supraphysiologic doses of testosterone, especially when combined with strength training, increase fat free mass and muscle size and strength in normal men. In some sports, such as body building, where muscle size is performance, steroids do improve performance. With proper nutrition and training, strength is also increased. Endurance is thought to be improved because steroids promote red blood cell proliferation, thereby increasing the blood's oxygen-carrying capacity. Steroids do reduce recovery time after injury

or exhaustion, enabling Athletes who abuse steroids to train longer and harder than they would otherwise. However, these Athletes risk injury and permanent disability from such overtraining. In addition, Athletes may lose flexibility or become “muscle bound”.

Abuse of anabolic – androgenic steroids results in several physiological side effects in both sexes, including the male pattern baldness, acne, and edema on the feet and legs. When adolescents take steroids, these agents can prematurely stop the lengthening of bones, resulting in stunted growth. Steroids abuse by males can result in sore or swollen breast tissue, testicular shrinkage, hair loss, and impotence. For females, unwanted effects include a deepening of the voice, menstrual irregularities, reduction in breast size, and enlargement of external genitals. Chronic steroid abuse produces a variety of irreversible health problems, including long bone fusion in children, changes in physical appearance, damage to organs and organ systems, including liver tumors, and prostate cancer in males. All oral and some injectable steroids reduce high-density cholesterol, while increasing low density cholesterol, increasing the risk for atherosclerosis (clogging of blood vessels) and myocardial infarction (heart attack). Chronic use of steroids also causes hypertension (chronic high blood pressure), thereby increasing the risk for cerebrovascular accidents (stroke).

Psychological Effects

In addition to the physiological effects, steroids abuse causes significant psychological changes in both men and women. Initially, users report feelings of well-being, euphoria, inflated feelings of self-esteem, increase in energy and sex drive, and improvement in appetite. These feelings may be accompanied by increased aggression and decreased tolerance to pain. Users often have

difficulty controlling their emotions, especially anger, and many experience sudden mood swings, aggressive behaviour, and combativeness.

When abusers discontinue their steroid abuse, they report dysphoria, depression, fatigue, decreased sex drive, insomnia, lack of energy, and dissatisfaction with body appearance. Some experience severe depression and thoughts of suicide. Steroids also increase the likelihood that the user will develop social problems as a result of personality or attitudinal changes. These problems could include disrupted and damaged interpersonal relationships, misuse and abuse of other prescription and illicit drugs, aggressive and anti-social behaviours resulting in trouble with the law (fines and imprisonment), and disqualification or disbarment from athletic competition.

The problem with steroids is that they do not act exclusively on one muscle or tissue group. Therefore, they stimulate all muscles and tissues, making the individual at risk for other adverse effects. The body's homeostasis is disrupted with the use of steroids, causing a variety of physical problems. "Heart disease will probably be the most widely noted side effect with anabolic steroid abuse. Blood pressure elevates significantly when an individual takes anabolic steroids due to the retained fluid and increased blood volume,… High Density Lipoproteins (HDL – C) that aid the body in removing cholesterol and are important to cardiac longevity, are drastically reduced with the use of androgens" (Taylor, 1985).

For adolescents, the drug can cause stunted growth and the premature closing of growth plates. Other problems resulting form steroid abuse by men include the following: Liver and kidney damage, breast development, acne,

baldness, cysts, shrinking of the testicles and sterility, reduced sex drive, headaches, nausea and dizziness.

For women the drug can cause the following: infertility, clitoral enlargement, breast atrophy, menstrual irregularities and male pattern baldness and voice change.

More and more evidence is accruing that the most significant effect of anabolic androgenic steroids use may be psychiatric. Psychological reactions such as extreme aggressive, mood swings, depression and delusions are reported in some individuals (Taylor, 1985).

Beta Blockers

Laverty (1990) viewed beta blockers or beta adrenoceptor as blocking agents. They mediate the increased cardiac output and increased blood flow that are caused by adrenaline release and adrenergic nervous system activity, which are an important part of the stress and arousal system. They are thus expected to reduce performance. They have however, been believed to enhance adaptation to training (Williams, 1991).

According to Kruse (1986) these drugs were introduced into medical therapy to reduce cardiac work, so that ischemic cardiac pain, called angina, is relieved, and to prevent arrhythmias and to lower blood pressure. They were also found to reduce muscle tremor, which prompted their non-medical use to enhance performance. As a consequence of their antitremor effect, they are used as anti anxiety agents. In the field of sports, their use as performance enhancers is limited to precision sports, like archery, shooting, snooker and bawls. Abuse of beta blockers can cause heart failure, depression and sleep disorders, decrease libido, impotence in males and bronchiospasm and

reduced maximal oxygen uptake, ventilartory capacity, heart rate, cardiac output and blood pressure (Wilmore and Costil, 1994).

Diuretics

According to Venkateswarlu (2000) diuretics are substances that increase the excretion of salt and water in the urine. The primary medical uses of diuretics include treatment of high blood pressure and excess fluid retention. Athletes use these drugs for the following three main reasons:

a. To reduce weight, either to qualify for the low weight category or in the belief that loss of weight increases performance.
b. To overcome fluid retention caused by androgenic steroids, and
c. To change the excretion rate of urine to modify urinary concentration of banned drugs to escape from being caught.

He went further to explain that diuretics act by modifying the transport of ions, like potassium, sodium, bicarbonate, and chloride, through the membranes of the kidney cell walls. More ions remain unabsorbed by inhibiting the re-absorption of ions from the filtrate derived from the blood. As urine must be ionically balanced, extra anions like bicarbonate or chloride take extra sodium, the main caution in the blood and thus filtrate into the urine. The increased removal of salt results in increased removal of water to keep urine as dilute as can be. The major problems of these diuretics is that by increasing the amount of sodium reaching the later stages of nephron, the exchange with potassium within the cells of the kidney is increased. This leads to a gradual loss of potassium from the body, which affects muscle function, especially the function of the heart. These drugs can cause muscle weakness, cramps and fatigue due to dehydration, which result in decrease of strength, endurance and

body weight. Use of high doses of these drugs results in reduced blood volume, increased blood viscosity and clotting or chronic electrolyte disturbances. Some of the most popular used diuretics are frusemide, acetazolamide and probenecid. Probenecid is not strictly a diuretic. But it is in the international Olympic committee (IOC) banned list of drugs because of its effects on urinary drug output.

Human Growth Hormone (hGH)

Human growth hormone (HGH) is not a steroid but a large protein secreted by the brain's pituitary gland. The function of human growth hormone (hGH) in the healthy body is to promote normal growth, primarily during childhood and adolescence. It does this by stimulating the production of growth factors known as somatomedins. The specificity of growth hormones is greater than that for steroids. Thus, only human growth hormone has no known medical uses in adult, but abuse of the drug has already begun especially by Athletes. Athletes who use human growth hormone (hGH) do so in the belief that it is free from side effects and is safer and even more effective than steroids. These ideas are not accurate. This is because the side effects from the use of human growth hormone (hGH) are serious and include acromegaly (a thickening of the bones, especially apparent in the face, hand and feet); organomegaly (enlargement of internal organs); diabetes, heart and thyroid diseases, menstrual disorders, decreased sexual desire and a shortened life span (Pinger et al, 1998).

Another possible side effect of human growth hormone (hGH) use that does not occur with steroid use has to do with the body's immune system. Because human growth hormone (hGH) is a protein, it is more likely to

stimulate antibody production by the immune system. Antibodies produced will attack human growth hormone (hGH) and perhaps other, similar endogenous proteins, a process that could result in an autoimmune condition. There is no solid evidence that human growth hormone (hHG) works better than steroids, because most Athletes who have used human growth hormone (hGH) have used it in conjunction with steroids. One claim that seems to be true is that human growth hormone (hGH) is hard to detect in the body. This factor has made human growth hormone (hGH) popular among users who are subject to random, unannounced testing in spite of the dangers (Pinger et al, 1998).

Venkateswarlu (2000) in support of Pinger's report explained that one of the major effects of growth hormone is implied in its name, it is required for the normal growth of children. Its deficiency causes dwarfism in them. It causes retention of nitrogen from protein foods and a proportional accumulation of other tissue constituents. It reduces the metabolism of sugars but increases the metabolism of fat. Its release is pulsetile and increased by exercise, fasting, deep sleep, stress and amino acid intake. It causes the release of polypetides, called somatomedines from the liver, which may produce its actual effects. Somatomedins are stored by binding them to plasma proteins, which may be responsible for the prolonged effects of growth hormone, though the plasma half life of growth hormone itself is only twenty (20) minutes. He went further to state that hyper-secretion of this hormone in adults and its excessive use by Athletes lead to acromegaly, characterized by distorted bone and organ growth, enlargement of fingers, toes and facial features, thickening of the skin, hair growth, heart and thyroid disease, high blood pressure, glucose intolerance leading to diabetes, impotence and shortened life span. Growth hormone

produces larger but weaker muscles. It appears that growth hormone increases fat free body mass, decreases fat mass and increases bone density. In addition, it appears to increase total body water, whole body protein synthesis rate and whole body protein balance.

Oral Contraceptives

These are birth control pills that contain synthetic versions of natural estrogens and progesterones. They function as contraceptives by preventing ovulation. Although experts feel that it is rarely advisable to manipulate a female Athlete's menstrual cycle to improve her performance, it might be appropriate for the elite female Athletes who perform better in follicular (early cycle) phase than at other times to use oral contraceptives to regulate menstrual cycle for important competitions. This should be done by administering low dose oral contraceptives continuously and not cyclically for several months before competition, continuing until ten days prior to the competition. However, the use of oral contraceptives involves several medical risks, some of which include nausea, weight gain, fatigue, blood clots, hypertension, stroke and liver tumor (Venkateswarlu, 2000).

Blood Doping

Blood doping according to Venkateswarlu (1976) is the administration of blood or related blood products to an Athlete other than for legitimate medical treatment. Blood doping is founded on the principle that the amount of oxygen available to the tissues is limited by the number of red blood cells in the blood. Theoretically, an increase in red blood cells increases the amount of oxygen delivered to the tissue that enable the Athletes to exercise more intensively or for a longer period of time. This method involves the removal of blood from the

Athletes, after which the red blood cells are separated from the plasma, which are then freeze-preserved. Meanwhile, the Athlete's red blood cell count gradually returns to normal in about two months time. Just before a competition, the freeze-preserved red blood cells are thawed, reconstituted with normal fluid and then reintroduced into the blood of the Athlete. As a result of this, the Athlete would have the advantage of increasing the number of red blood cells, condition called erythrocythemia (Vankateswarlu, 1976).

Blood doping is beneficial to Athletes from endurance sports, like skiing, long distance running, cycling and swimming. However, it has a number of risks, some of which include infection, reaction when the blood of another person is transfused, allergies and high blood pressure. Unfortunately, there is no foolproof method to determine whether a high red blood cell count is a result of blood doping. Another problem is that at least 900ml of blood is required to produce a measurable increase in performance. However, this enhanced performance may only last a few days (Venkateswarlu, 1976).

Spriet (1990) explained that it requires a minimum of 5 to 6 week interval between withdrawal and reinfusion of blood. Blood should be stored by freezing. If it is refrigerated, forty percent (40%) of red blood cells are destroyed and if frozen, only fifteen (15%) are destroyed. The unfortunate thing about blood doping is that no one can predict how much increase of red blood cells will occur when it is used. If there is excessive increase, blood viscosity will increase to dangerous levels, which could lead to clotting or heart failure.

Other practices include urine substitution and soda loading. Urine substitution or transplanting involves the replacement of urine in the bladder of an Athlete with urine from someone not using drug. This practice is now

banned. On the other hand, the practice of soda quantity of substitutes, like bicarbonate of soda, by Athletes to prevent deleterious acid increase in the muscle (Venkateswarlu, 2000). There has been adequate evidence to believe that there are substances used by Athletes to mask the drugs they consume. These are called masking agents or blocking agents. There are believe to interfere with the ability of the laboratory to detect banned substances. For example, Athletes often use the drug probencid, to block the detection of anabolic steroids. They use this drug because of its ability to impaire the excretion of banned substances (Venkateswarlu, 2000).

Restricted Drugs

There are certain drugs and substances that are banned by International Olympic Committee (IOC), and there are some drugs that are subject to restrictions. Alcohol, marijuana, local anesthetics and corticosteroids are not prohibited by the International Olympic Committee (IOC) but may be subject to test at the request of International Federations (Venkateswarlu, 2000).

Alcohol

Alcohol is a very strong Central Nervous System (CNS) depressant which is widely used in sports. It can be classified both as a nutrients as it provides energy (7kcal/g) and as antinutrients as it can interfere with the metabolism of other nutrients. Because of its depressant effect on the Central Nervous System (CNS), it is also classified as a drug (Venkateswarlu, 2000).

According to Pinger et al (1998) alcohol when consumed in large quantities, shuts down brain functioning, respiration and circulation to the point that death is inevitable. In small doses, alcohol appears to produce stimulating effects, and some users may act more jubilant, less rigid and more talkative

than normal. These behavioral changes are caused by alcohol's ability to produce disinhibition. As a person continues to drink alcohol faster than it can be oxidized by the liver, the blood alcohol concentration (BAC) rises, and the depressant effects become more apparent and dangerous. A fairly predictable sequence of physiological and behavioral effects takes place when a person drinks alcohol at a rate faster than one drink every hour.

Available studies support the view that most psychomotor functions related to athletic performance are impaired and not improved by alcohol consumption. It has also been shown that alcohol consumption does not enhance strength, power, speed, muscular endurance or cardiovascular endurance (Williams, 1991). The depressant effects of alcohol on the Central Nervous System (CNS) decrease pain sensation, enabling an injured Athlete to continue to perform with a great risk of increasing the severity of the injury. It also suppresses the release of antidiuretic hormone (ADH) that causes more excretion of water in the urine, resulting in decrease blood pressure and dehydration. This can have serious consequences to performance in hot environment (Williams, 1991).

Nkowan and Jansen (1999) cited alcohol as one of the psychoactive drugs being abused as ergogenic acids which has been available for traditional use in Africa for many years. As an ergogenic aid, alcohol is proposed to:

i. Calm the nerves

ii. Reduce inhibitions

iii. Increase mental alertness

iv. Reduce pain

v. Increase confidence

vi. Reduce muscle tremor

However, influencing these conditions appears to have a two-part response: an initial sensation of excitement followed by depressive psychomotor effects. It is on this note that Wilmore and Costil (1994) revealed that alcohol:

a. Decreases accuracy, balance and reaction time

b. Slows visual tracking and information processing

c. Decreases strength, power and muscle endurance

d. Dehydrates the body.

These adverse effects negate all the purported benefits thereby placing an Athlete on alcohol influence to a great risk of sustaining injury. It appears that alcohol produces the 'feeling' of improved psychomotor skill, when in fact they are impaired while under the influence of even a very small amount of the drug (Wilmore and Costil, 1994).

Kleiner (1996) asserted that there is some evidence that alcohol may be able to reduce anxiety and muscle tremor, but the associated decrease in coordination, balance and information processing would negate any real benefit to sports performance gained from the advantage in those areas. It should be noted that the depressive effect of alcohol does dull the sensation of pain, but pain indicates injury. The Athlete on alcohol runs a greater risk of increasing the severity of an injury because without pain, they may be unaware of the extent of the damage. In addition, alcohol dehydrates the body by blocking the release of antidiuretic hormone, causing the kidneys to excrete excess body fluid in the form of urine.

There are some sympathomimetic agents that are used by Athletes to enhance performance. The term ‘sympathomimetic’ refers to the compounds that mimic natural neurotransmitters, adrenaline and noradrenalin, which are usually released to mediate the function of the sympathetic nervous system, which affects cardiovascular, glandular and intestinal functions. In the body, adrenaline and noradrenalin act through specific receptors called adrenoceptors. There are two classes of adrenoceptors. Alpha-adrenoceptors are present mainly in blood vessels and cause vasoconstriction. Beta adrenoceptors are present in heart, lungs, and blood vessels. There are two classes of beta adrenoceptors. Beta – 1 adrenoceptors are present in the heart, which increase heart rate and force of contraction on stimulation. Beta – 2 adrenoceptors are present in the lungs and blood vessels. On stimulation, they cause bronchodilation and reduction in mucus secretion in the lungs, and vasodilatation in the blood vessels. The effects of sympathomimetic amines are many and varied, depending on where they act and on which receptor class they are mainly active (Kleiner, 1996).

Adrenaline itself is a stimulant drug that increases cardiac output and diverts blood flow to the muscle. However, it has a very short duration of action and is not absorbed orally. Therefore, it is unlikely drug to enhance performance. Similarly, ephedrine is an orally active drug used to induce bronchodilation in asthmatics. It shares similar but less dramatic euphoriant effects with amphetamines. It has therefore, the potential for use to enhance performance. As non sedative beta adrenoceptor agonists are banned in sports, ephedrine can be used by topical application directly and only on the lung by the use of aerosol sprays inhaled by the patient to cause

bronchodilation and to relieve the wheeze and secretions (Venkateswarlu, 2000).

2.7 Incidences Of Drug Use Among Athletes

According to Orkula (2010) the use of banned substances by Athletes is a global problem that World Anti-Doping Agency (WAD) has been grappling with in the last three or more decades. The ugly trend has ruined the careers of many world super and rising star Athletes like Marion Jones, Ben Johnson and the host of other foreign and local Athletes. Many athletes have used drugs to enhance performance in the past. Some of them are disqualified and banned for some years. There are evidence to support the claim that Athletes have used drugs over the years to boost performance in countries like United States of America, Canada, United Kingdom, Jamaica, Greece and other developing countries including Nigeria. The following Athletes have used drugs in the past during sports competition. Harold Conoly, the the 1956 Olympic Hammer thrower champion admitted taking Danabol (anabolic steroid) briefly after 1960 Olympics. Dave Steen, the Canadian shot putter admitted taking a course of 25 Danabol tablets during the training for his gold medal performance at the Commonwealth Games in Kingston, Jamaica, 1966. Oshea 1979 reported that 15% of the returned questionnaires of the British track team which competed in the Tokyo Olympic Game in 1964 confessed that they used dope. In the 1968 Mexico Olympic Game, several medals were lost as some athletes were disqualified because of the use of drugs. In the Munich Olympics, six athletes were reportedly disqualified for positive urine testing.

In 1970, World Weight lifting championships in Columbus Ohio, eight out of the nine subjects tested during the first half of the competition were found to

be positive for amphetamines. In the 1976 Olympic Games in Montreal Canada, three competitors (two male weight lifters and one female discuss thrower) were disqualified for testing positive to anabolic steroids. Chioma Ajunwa, a Nigerian long jump sensational was also disqualified for testing positive to steroids. Canadian sprint super star Ben Johnson was striped of his Gold medal some hours after winning the event when he tested positive to the use of anabolic steroid (Lawal, 2004).

Other Nigerian Athletes who have in the past been punished for taking performance enhanced drugs include, Edith Agonye whose medal at the All African Games in Harare 1995 was retrieved for taking banned drugs. During the World Athletic Championship in Berlin, Nigeria's shot put, Queen Vivan Chukwuemeka was suspended for taking performance enhanced drug.

In the recent time, three of the Nigerian Athletes, Samuel Okon, Osayomi Oludamola and Folashade Abugan were disqualified from the 2010 Commonwealth Games held in India because they tested positive to banned drugs. They were not only disqualified from the Games but all their competition results at the 2010 Commonwealth Games were nullified (Orkula, 2010).

2.8 Effects of Drug use on Athletes' Behaviour

According to Mohammed (1998) use of Drugs by Athletes has brought about some sports competitions being disrupted by Athletes, example, violence has featured in Nigerian schools sports such as Nigeria Colleges of Education Games Association (NICEGA). On 14th April, 1998, violence ensued as College of Education Kafanchan students picked on the hockey referee during a semi-final match between them and Oyo State College of Education, Ilesha at the finals of 6th Nigeria Advanced Teacher's Colleges and Colleges of Education

Games Association held at Oyo State College of Education, Ilesha. During the clash, more than 30 casualties were recorded. He further reported that in April 27th, 1994, during school sport festival held at the Rivers State College of Education, Port Harcourt, there was conflict after a handball match between the hosting College and Federal College of Education, Kano on the ground of poor officiating. This drug-induced behaviour of Athletes led to the unannounced result of concluded events and many people were injured.

Use of drug by Athletes has resulted to violence which has disrupted officiating during sports competitions. Athletes' behaviour as a result of influence of drug has brought about disturbances in officiating which has disrupted competitions at several intervals and in some cases brought about inconclusiveness of the competitions (Terry and Jackson, 1985).

Use of drug by Athletes is associated with violence during sports competitions. Violence in Sports refers to physical acts committed in contact sports such as football, hockey, boxing and wrestling beyond the normal levels of contact expected while playing the sport. These can include intentional attempts to injure player by another player or Coach, but can also include threats of physical harm or actual physical harm sustained by players or Coaches by those engaging in spectating of sports (Terry and Jackson, 1985). Terry and Jackson (1985) defined sports violence as behaviour which causes harm, occurs outside of the rules of the sport, and is unrelated to the competitive objectives of the sport. This behaviour can be attributed to drug use in sports.

Leonard (1988) asserted that while most occurrences of violence during sports competitions emanate from players who had taken drug which had

adversely affected officiating of various competitions, others, including Coaches, parents, fans, and media, also contribute to what has been described as an epidemic of violence in sports today. He further identified two forms of aggression in sports which were instrumental aggression which is non-emotional and task-oriented, and also reactive aggression which has an underlying emotional component, with harm as its goal. Violence is an outcome of reactive aggression.

An increase in both frequency and seriousness of acts of violence as a result of use of drug by the Athletes during sport competitions has been well documented. Violence is most prevalent in team contact sports such as football and hockey, also athletics such as track events (Leonard, 1988).

Weiser, Katty, Love and Phyllis (1988) opined that intermittent explosive disorder may be a cause of violence in sports. Some Athletes may be genetically predisposed to violence or have unusually high testosterone levels, particularly male Athletes. Athletes sometimes resort to violence, in hopes of injuring and intimidating opponents. Such incidents may be part of strategy developed by Coaches or players. These behaviours are attributed to drug use.

In boxing, unruly or extremely violent behaviour by one of the contestants often results in the fighter breaking the rules being penanalized with a points deduction, or in extreme cases, disqualification (Weiser, Kathy, Love and Phyllis, 1988).

Violence has featured in the English football in the 1980s. The actions of English football hooligans and firms in the 1980s caused English team to be

banned from European competition for six years after the Heysel stadium disaster in 1985 (Weizer, Kathy, Love and Phyllis, 1988).

Animu (1993) asserted that violence and conflict are manifestation of action by a competitor or spectator on a large or small scale which cause or threaten to cause physical hurt on others either before, during or after sporting encounter. The above definition gave birth to the issue of hooliganism which is a drug induced behaviour.

2.9 Control Measures of Drug use among Athletes Drug Users

It should be remarked that drug testing in sports began at the 1968 Olympic Games. The International Olympic Committee (IOC) has instituted International doping testing procudures. Testing procedures involving very cautions sample collection and handling and the use of highly sophisticated equipment which has resulted in increasing detection of drug cheats during sports competition (Agwubike, 2000). He outlined commonly used techniques in drug analysis for ergogenic effects as: radio immunoassays (RIA), mass spectrometer (MS), capillary gas liquid chromatography and high performance liquid chromatography and high performance liquid chromatography (HPLC), ultraviolet (UV) spectrometry as well as an array of immunoassay tests. All these techniques should be readily available during sports competitions so as to easily detect Athletes drug users, and when they are detected, they should be banned for a period of time, or disqualified for a specific period.

Additional efforts are still needed to resolve the issue of drugs and alcohol abuse and addition at all levels of athletic endeavor. Television and other news from the 2000 Olympic games in Sydney, Australia, reported many instances of Athletes being disqualified for using banned substances. In some

cases, the disqualification was not contested, but in others the Athletes thought they had been disqualified unfairly because they had taken something prescribed for them or something that they were not aware had been banned. In view of this report, Oakley and Charles (2004) highlighted some tips for Athletes on how to avoid drug problems by Jack Swarbick, lawyer for USA gymnastics as follows:

1. Be familiar with the International Olympic Committee's banned substances list. This means knowing not only what drugs are on the list but also the types of medications or even foods in which those drugs are often found.
2. Make certain that others who ought to know, such as the Athlete's parents, physician are also familiar with the banned substances list.
3. Know the medications you are using. Athletes should consult with the united States Olympic Committee (USOC) regarding the potential for any medications to contain elements of banned substances and should be careful to list all medications when completing the screening form as part of the United States Olympic Committee's(USOCS) drug testing programme.
4. At competitions, drink only of containers that were sealed when you got them, and once you have begun drinking out of a container do not leave it unattended. Several sports have implemented fairly rigorous security measures for the handling of coolers and water bottles.
5. When you are required to produce a urine sample as part of the drug testing procedures, never surrender possession of the sample or leave it

unattended until after you have sealed it inside the shipping canister provided by the United Stats Olympic Committee (USOC).

6. If there are any irregularities in the process by which you give a urine sample and place that sample in the sealed container (example, a cracked beaker, a spilled sample, or unauthorized individuals on-site), immediately bring those irregularities to the attention of the United States Olympic Committee (USOC) drug control administrator on-site.
7. If you are informed that you have tested positive for a banned substances (and you dispute that result), you will be invited to witness the testing of the second half (that is, the 'B sample')of your urine sample. Attend the test of the B sample, take with you an individual qualified to evaluate the process, and consider video taping the test.

All these preventive measures will help to limit the occurrences of drug use in any athletic competitions. These tips should give both Olympic and non Olympic competitors an idea of how complex and difficult this problem can be.

2.10 Summary

The pressures of professional athletic competition and the accompanying lifestyle can create a situation in which Ahletes seek both relief and the enhancement of performance by using drugs and alcohol. The widespread use of cocaine, marijuana, alcohol, steroids, amphetamines, and other drugs in professional sports came to the attention of the general public in the drug scandals of the past three decades. This was an indicator of the high level of denial and enabling behaviour by players, coaches and management. Today, teams are making more concerted efforts at education, assessment and treatment (Fields, 2004).

According to Oloruntoba (2005) Schools, Colleges and other Organizations in sport would not function effectively without some elements that holds them together and given them direction so they can achieve the goals for which they exist, this element is management. The justification of any sports programme, according to Nwankwo (1996) is its contribution to the fullest development of the individuals who participate in the programme. In order to achieve that objective, the manager should ensure adequate improvement and execution of successful sports programmes.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The purpose of this study was to assess the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition in North Central Geo-Political Zone, Nigeria. To achieve the purpose of this study, the research design, population, sample and sampling techniques, research instrument, procedures for data collection and the statistical techniques have been described in this chapter.

3.2 Research Design

The expost-facto research design was employed. This is because the information required on the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition in North Central Geo-Political Zone, Nigeria already exist among them (Nworgu, 1991).

3.3 Population for the Study

The population for this study consisted of all the male and female Athletes in Federal and State Colleges of Education in North Central Geo Political Zone of Nigeria.

Table 3:4:1 States in North Central Geo-political Zone and Colleges of Education

States	Colleges of Education
Benue	College of Education Katsina-Ala, and College of Education Oju
Kogi	Federal College of Education Okene, and College of Education Ankpa
Kwara	College of Education Ilorin, College of Education Technical Lafiage and College of Education Oro
Nasarawa	College of Education Akwanga
Niger	Federal College of Education Kontagora, and College of Education Minna
Plateau	Federal College of Education Pankshin, and College of Education Gindiri
Federal Capital Territory (FCT)	FCT College of Education Zuba

Source: Souvenir Programme, NCCE, 2010

3.4 Sample and Sampling Technique

For the purpose of this study, sample and sampling techniques used was stratified Random Sampling techniques. In these techniques all the Federal and State Colleges of Education in the North Central Geo-Political Zone were stratified into two existing NICEGA zones, A and B. Zone A consisted of College of Education Katsina-Ala, College of Education Oju, Federal College of Education Okene, College of Education Ankpa, College of Education Ilorin, College of Education Technical Lafiage and College of Education Oro, while Zone B consisted of College of Education Akwanga, Federal College of Education Kontagora, College of Education Minna, Federal College of Education Pankshin, College of Education Gindiri and FCT College of Education, Zuba. From each selected College of Education, twenty percent

of the specified subjects for the study were selected at random. Thus a total of 234 subjects were selected at random from 1,170 study population. A total of 234 subjects were selected at random from ten Colleges of Education in the North Central Geo-Political Zone selected for the study where (125 were males and 109 were females). The different sporting events and categories of the subjects were shown in table 3.4.2.

From the two existing NICEGA Zones, ten Colleges of Education were selected at random. In this selection, all the Colleges in the two zones were given numbers from which five Colleges of Education from each zone were picked by the use of dip and pick method. Nworgu (1991) reported that this method will ensure equal opportunity to all. A total of 10 Colleges of Education were selected for the study. These Colleges are as follows: Colleges of Education, Katsin-Ala, Federal College of Education, Okene, College of Education Ankpa, College of Education, Ilorin, College of Education, Oju, College of Education Akwanga, College of Education, Minna, Federal College of Education, Kontagara, Federal College of Education, Pankshin and FCT College of Education, Zuba.

Table 3.4.2: Distribution of Sample According to Each College of Education and Sporting Events

Names of Selected Colleges	No of Athletes Used in the Selected Sports				
	Football	Relay races	100m	Hurdles	Total
COE, Katsina-Ala	12	4	4	4	24
COE, Oju	13	3	4	4	24
FCE, Okene	12	4	3	3	22
COE, Ankpa	14	3	3	2	22
COE, Ilorin	12	5	4	3	24
COE, Akwanga	13	4	3	3	23
COE, Minna	12	3	4	4	23
FCE Kontagora	14	2	5	4	25
FCE, Pankshin	13	3	4	3	23
FCT COE, Zuba	12	4	3	5	24
Total	**127**	**35**	**37**	**35**	**234**

The above table showed that out of the sampled subjects, one hundred and twenty-seven footballers, thirty-five track Athletes (relay), thirty-seven track Athletes (100m) and thirty-five track Athletes (hurdles) were randomly selected for the study.

Sporting events were selected randomly based on the commonality of the abuse of drug. In this selection, all the events where Athletes mostly take drugs such as body contact games and track events were given numbers from

which four sporting events were picked by the use of ballot method. A total of four sporting events were selected for the study which include; football, relay races, 100m and hurdles. From each selected Colleges of Education, twenty percent of the subjects from the total number of Athletes in each College of Education were selected for the study. Nworgu (1991) reported that this method gives all the Athletes from the selected Colleges of Education the equal opportunity of being selected and represented in this research. This is shown in table 3.4.3 below:

Table 3.4.3: Distribution of Sample According to the total number of Athletes in Each College of Education

Colleges	Total No of Athletes from each College		20% of the Athletes in the Selected Sports		Distribution of the subjects According to Sporting Events				
	Football	Athletics	Football	Track events	Football	Relay	100m	Hurdles	Total for Sport Events
COE, Katsina-Ala	60	60	12	12	12	4	4	4	24
COE, Oju	65	55	13	11	13	3	4	4	24
FCE, Okene	60	50	12	10	12	4	3	3	22
COE, Ankpa	70	40	14	08	14	3	3	2	22
COE, Ilorin	60	60	12	12	12	5	4	3	24
COE, Akwanga	65	50	13	10	13	4	3	3	23
COE, Minna	60	55	12	11	12	3	4	4	23
FCE Kontagora	70	55	14	11	14	2	5	4	25
FCE, Pankshin	65	50	13	10	13	3	4	3	23
FCT COE, Zuba	60	60	12	12	12	4	3	5	24
Total	**635**	**535**	**127**	**107**	**127**	**35**	**37**	**35**	**234**

The above table showed the total number of Athletes from the selected sports in all the selected Colleges of Education used for this study. The percentage (20%) of the total number of subjects in each sporting event from all the Colleges was used as shown in table 3.4.3. The distribution of the subjects to the various sporting events used for the study was done based on the 20%. Of the Athletes from each of the selected sports.

Thus, one hundred and twenty seven footballers, thirty-five track Athletes (relay), thirty-seven track Athletes (100m) and thirty-five track Athletes (Hurdles) were randomly selected for the study. The distribution ensures that all the footballers and tracks Athletes from the selected Colleges of Education were given equal opportunity of being selected. A total of 234 subjects from 1,170 study population were selected for the study.

3.5 Instrumentation

In order to achieve the purpose for this study, a Questionnaire containing thirty items in six sections was developed. Section A consisted of five items on demographic characteristics of the respondents, section B consisted of five items on the use of drug and behaviour of Athletes in Colleges of Education during NICEGA competition in North Central Geo-Political Zone, Nigeria, section C consisted of five items on the use of drug by Athletes in Colleges of Education and officiating of NICEGA competition in North Central Geo-Political Zone, Nigeria, section D consisted of five items on the use of drug by Athletes in College of Education and their health during NICEGA competition in North Central Geo-Political Zone, Nigeria, section E consisted of five items on the use of drug by Athletes in Colleges of Education and their performance during NICEGA competition in North Central Geo-Political Zone,

Nigeria and section F consisted of five items on the use of drug by Athletes in Colleges of Education and conflict during NICEGA competition in North Central Geo-Political Zone, Nigeria.

3.6 Validity of the Instrument

Before vetting by the jurors, the supervisors had earlier made a critique of the instrument. To ensure validity of the instrument, five copies of the questionnaire were distributed to five(s) jurors in the Department of Physical and Health Education, Ahmadu Bello University, Zaria. The questionnaire was vetted in order to determine its face and content validity and based on their suggestions and corrections, some of the items on the questionnaire were restructured or modified, after which the final draft was prepared and administered.

3.7 Administration of the Questionnaire

For the purpose of this study, Colleges of Education in the North Central Geo-Political Zone of Nigeria were used in the administration of questionnaire. The distribution of the questionnaire was done by the researcher and one research assistant for each state.

3.8 Statistical Analysis

The data collected were analysed by a statistical expert using Statistical Package for Social Science, SPSS 13.

The statistical procedure selected for the analysis were frequency and percentages which were used for the respondents demographic variables. Means and standard deviation were used for the analysis of respondents opinion on the influence of drug use on Athletes' behaviour during NICEGA competition. The one-sample t-test procedure was used to test the hypotheses. All the hypothesis were tested at 0.05 level of significant.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the statistical analysis of the responses of the Athletes on the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competitions. The first section described the demographic characteristics of the Athletes who were involved in the study. This section is analyzed in frequencies and percentages in a single table. The other sections where the variables relating to the influence of drugs on the performances of the Athletes in the NICEGA competitions were assessed. Each of the item and variables in the respective sections are analyzed with mean scores and standard deviations. The mean score were computed on the five point interval scale used in the instrument for the study. Decisions on each of the items and variables were based on agreement signified by the magnitude of the score. The mean score for the minimum level of agreement is 3.5, based on the five point scale used in the study. A mean at this level or higher would therefore constitute agreement on the scale. This fixed mean was used as the constants for the test of the hypotheses. The study's hypotheses and discussions of the findings from the analyzed data were presented in the last two sections of the chapter.

4.2: Analysis of the respondents' demographic characteristics

Among the demographic characteristics of the Athletes selected along with their opinion on the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) were sex, age, the type of sports, competitive sports experience and level of study in the Colleges. A total of five hundred and seventy (570) Athletes were involved in the study. In Table 4.1 their demographic characteristics are classified in frequencies and percentages.

Table 4.1: Distribution of the respondents demographic characteristics

Variables	Variable options	Frequency	Percent
Sex	Male	128	54.7
	Female	106	45.3
	Total	**234**	**100.0**
Age	Less than 21years	16	6.8
	21-24years	166	70.9
	25-29years	41	17.5
	30-34years	11	4.7
	Total	**234**	**100.0**
Sports	Football	100	41.5
	Relay races	52	20.5
	100m	40	13.7
	Hurdles	42	16.7
	Total	**234**	**100.0**
Experience	1-2years	52	22.2
	3-4years	62	26.5
	5-6years	63	26.9
	7-8years	30	12.8
	Above 8years	27	11.5
	Total	**234**	**100.0**
Level of study	Pre-NCE	20	8.6
	NCE I	33	14.1
	NCE II	42	17.9
	NCE III	139	59.4
	Total	**234**	**100.0**

A total of 128 or 54.7% of the Athletes were males while 106 or 45.3% were female. This selection help to balance any gender bias that may have been associated with the conclusion from the study. This is so since both sexes

strive for achievement in any competitive sports. The decisions on any of the variables would be based on weighted mean scores.

Most of the respondents were concentrated in the 21-24years age range. This age range accounted for 70.9% of the total respondents. Other groups in the table were relatively lower in number. For example, Athletes with ages lower than 21 were only 6.8% while those within 25 and 29years were 17.5% of the total respondents. Those who were above 30years were only 4.7%. This distribution clearly indicated that the Athletes were relatively within the youthful stage when the urge for higher achievement is most paramount in their sports endeavours. This is often the attraction for the use of drugs.

The number of Athletes from each of the respective sports involved in the study are as indicated in the classification shows that those involved in football competition were more with 41.5% of the total respondents. Respondents from Relay races were 20.5% while those in 100m were 13.7%. The respondents from Hurdles were 16.7%. The table thus shows a proportional representation of the different sports in which the Athletes participate during the NICEGA competitions.

The Athletes' years in competitive sports indicated a fairly proportional representation as indicated in the table. Athletes who have between 1 and 2years of competitive sports experience among the respondents were 22.2% while those with 3 and 4years and 5 and 6years were 26.5% and 26.9% respectively. Those with 7 to 8 years of experience were 12.8% while 11.5% said they have more than 8years of competitive sports experience. This clearly indicated that most of the Athletes were used to competition and possible use of any substance that could enhance performance.

By level of education, 139 or 59.4% of the Athletes were in their final year (NCE III) in the Colleges of Education involved in the study. Those who were in NCE II were 17.9% of the total respondents while 14.1% of the Athletes were in NCE I. Only 8.6% of the Athletes were in Pre-NCE level in the Colleges.

Table 4.2: Mean and Standard Deviation on influence of drug use on Athletes' behaviour in NICEGA competitions

Use of drugs on Athletes' behaviours in NICEGA competitions	Mean	Std. Dev
1. Use of drugs by Athletes in Colleges of Education could lead to obnoxious(unpleasant behaviour such as violence crimes during NICEGA competition in North Central Geo-Political Zone, Nigeria	4.41	.875
2. Use of drugs by Athletes in Colleges of Education could lead to crises such as aggression and fighting among participants during NICEGA competition in North Central Geo-Political Zone, Nigeria.	4.03	1.076
3. Use of drugs by Athletes in Colleges of Education during NICEGA competition could lead to deviant behaviour such as forcible rape on the female participants which could cause HIV and other sexual transmitted infections during NICEGA competition in North Central Geo-Political Zone, Nigeria	4.28	.795
4. Use of drug by Athletes in Colleges of Education could increase the rate of disturbances in officiating during NICEGA competition in North Central Geo-Political Zone, Nigeria	4.12	.844
5. Use of drug by Athletes in Colleges of Education could lead to non-adherence to rules of the competitions and lack of respect to the sport officials during NICEGA competitions in North Central Geo-Political Zone, Nigeria.	3.97	.985
Aggregate mean score	**4.16**	**0.915**

It was found out that use of drugs by Athletes in Colleges of Education could lead to unpleasant behaviour such as violent crimes like maladjusted dispositions, aggression and fighting, deviant behaviour and forcible rape,

increase in rate of disturbances in officiating and non-adherence to rules and disrespect to the sport officials during NICEGA Competitions. It shows clearly that the use of drugs significantly influence the behaviours of Athletes during NICEGA Competitions.

4.3 Assessment of the Influence of Drug Use on Athletes' Performance During NICEGA Competitions

The influence of drug use on the performance of the Athletes is the second objective of this study. The related research question sought to determine the extent to which drug use is perceived to have influenced Athletes' performance in the competitions in terms of increased chances of winning medals. The opinions of the respondents on the influence of drug use on the performance of the Athletes in the competitions are scored in means and standard deviations in Table 4.3.

Table 4.3: Mean and Standard Deviation of scores on influence of drug use on Athletes' performances in NICEGA competitions

Use of drugs on Athletes' performance in NICEGA competitions	Mean	Std. Dev
1. Use of drug by Athletes in Colleges of Education could increase the chances of winning in NICEGA competition in North Central Geo-Political Zone, Nigeria	3.61	1.300
2. Use of drug by Athletes in Colleges of Education could increase the number of medals won by the participants during NICEGA competition in North Central Geo-Political Zone, Nigeria	3.05	1.310
3. Use of drug by Athletes in Colleges of Education could increase the number of trophies and cash award won by the Athletes during NICEGA competitions	3.10	1.230
4. Use of drug by Athletes in Colleges of Education could make the participants gain more recognition and also creates room for talent identification because of Athlete's high level performances during NICEGA competition	3.58	1.098
5. Use of drug by Athletes in Colleges of Education during NICEGA competition erodes the credibility of the competition	3.80	1.170
Aggregate mean score	**3.43**	**1.222**

It was found out that use of drugs by Athletes in Colleges of Education could increase the number of medals and trophies won and also create room for talent identification because of the Athletes level of performances as a result of drug use during NICEGA Competitions. This would at the same time automatically erode the credibility of Athletes and the competitions. It shows clearly that the use of drugs in sports could increase the number of medals won by the Athletes, and at the same time erode the credibility of Athletes and the

competitions because the joy and glamour often associated with fair play seemed to be obscured.

4.4 Assessment of the Influence of Drugs Use on Athletes' Health During NICEGA Competitions

The third objective of the study aims to identify the influence of drugs on the Athletes' health during the NICEGA competition. The related research question here aims to establish the influence of drugs on the rate of injury, endurance of the Athletes, fatigue and the general physical health of the Athletes. In Table 4.4, the opinions of the respondents on the influence of drug use on the health of the Athletes during the competitions are scored in means and standard deviations.

Table 4.4: Mean and Standard Deviation of scores on influence of drug use on Athletes' health during NICEGA competitions

Use of drugs on Athletes' health during NICEGA competitions	**Mean**	**Std. Dev**
1. Use of drugs by Athletes in Colleges of Education could increase the rate of injury on the participants during NICEGA competition in North Central Geo-Political Zone, Nigeria	3.76	1.214
2. Use of drugs by Athletes in Colleges of Education could increase the endurances capacity of Athletes during NICEGA competition in North Central Geo-Political Zone, Nigeria	3.63	1.136
3. Use of drugs by Athletes in Colleges of Education could reduce fatigue and boredom during NICEGA competition in North Central Geo-Political Zone, Nigeria	3.93	1.149
4. Use of drugs by Athletes in Colleges of Education during NICEGA competition could lead to death of an Athlete as a result of burst blood vessels in the brain or heart failure	4.22	.844
5. Use of drugs by Athletes in Colleges of Education produces energy to the Athlete's working muscles during NICEGA competition	3.90	1.138
Aggregate mean score	**3.89**	**1.096**

It was found out that use of drugs by Athletes in Colleges of Education could increase the rate of injury on the participants during NICEGA

Competitions. Drug use by Athletes could also lead to death as a result of burst blood vessels in the brain or lead to heart failure. This shows clearly that the use of drugs had significant influence on the health of Athletes during NICEGA Competitions.

4.5 Assessment of the Influence of Drugs Use on Conflicts Among Athletes During NICEGA Competitions

This section investigated the consequences and reactions resulting from the use of drugs by Athletes during the competitions. This is the last objective of the study and the associated research question sought to establish possible conflicts during the competitions attributable to the influence of drug use by the Athletes. In Table 4.5, the opinions of the respondents on the resulting conflicts from the use of drugs during the competitions are scored in means and standard deviations.

Table 4.5: Mean and Standard Deviation of scores on influence of drug use on conflicts among Athletes during NICEGA competitions

Use of drugs on conflicts among Athletes in NICEGA competitions	**Mean**	**Std. Dev**
1. The detection of performance enhancing drug in an Athlete during NICEGA competition could lead to conflict before during and after competition among Athletes.	4.02	0.866
2. Use of drug by an Athlete in a particular College of Education during NICEGA competition could lead to conflict among officials from other Colleges of Education	4.15	0.843
3. Use of drug by same Athletes in Colleges of Education could lead to conflict between the Athletes and officiating officials during NICEGA competition	3.93	0.898
4. Use of drug by Athletes in Colleges of Education could lead to conflict between a coach and the Athletes during NICEGA competition	4.06	0.697
5. There could be conflict between Athletes and officials in the result presented and declared as a result of use of drug by an Athlete during NICEGA competition.	3.92	1.055
Aggregate mean score	**4.02**	**0.872**

It was found out that the use of drugs by Athletes in Colleges of Education could lead to the incidences of conflicts among Athletes, officials, Athletes and officiating officials, Coach and Athletes, and also an increase in the rate of violence because of presentation and declaration of result by the officials after the competition. This shows that the use of drug by Athletes had

significant influence on NICEGA competitions as a result of incidences of conflicts among participants and officials

4.3 Test of Hypotheses

In pursuance of the objectives of this study and to provide statistical solutions to the question raised, one major hypothesis with four sub-hypotheses were formulated. The hypotheses were tested as follows:

Major Hypothesis:

There is no significant influence of drug use by Athletes in Colleges of Education on their behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition in North Central Geo-Political Zone, Nigeria. The four components of the influence of drug use by Athletes on their behaviour during competitions were assessed in Table 4.2 to Table 4.5. The aggregate mean score is compared with a fixed mean of 3.5 which stand for the minimum level of agreement on the five point scale used in the study. The point here is that if the Athletes are in agreement that drug use has significant influence on the NICEGA competition, their mean score should exceed 3.4. The reverse is expected to be the case where they disagreed with the notion. The One sample t-test was therefore used for the hypothesis because its enables the mean score to be compared with a fixed mean of 3.50 which will indicate agreement on the five point interval scale. The result of the test is summarized in Table 4.6.

Table 4.6: One sample t-test on influence of drug use on Athletes' behaviour during NICEGA competitions

Variables	N	Mean	Std. Deviation	Std. Error	t-value	DF	P
Behaviour	234	3.9234	.41007	.02681	15.795	233	.000
Fixed mean score	234	3.50	0.000	0.000			

t(233) 1.96, P<0.05

The result in the table above revealed that drug use by Athletes had significant influence on their behaviour during NICEGA competitions. The calculated t-value is 15.795 at 233 degree of freedom and the probability level of significance observed in the test is 0.000 (P < 0.05). The critical value of t at 233 degree of freedom is 1.96. This means that drug use by Athletes negatively affect their conduct during NICEGA competitions. Therefore the null hypothesis that there is no significance influence of drug use by Athletes in College of Education on Athletes' behaviour during NICEGA competition in North Central Geo-Political Zone, Nigeria is rejected.

Sub-hypothesis I:

There is no significant influence of drug use by Athletes in Colleges of Education on the officiating of NICEGA competition in North Central Geo-Political Zone, Nigeria

In this hypothesis, the mean scores of the respondents on the influence of drugs use by Athletes in Table 4.2, was tested against a fixed mean score of 3.50. The result of the one sample t-test is shown in Table 4.7.

Table 4.7: One sample t-test on influence of drug use by Athletes on the Officiating of NICEGA competitions.

Variables	N	Mean	Std. Deviation	Std. Error	t-value	DF	P
Officiating	234	4.16	0.637	0.042	15.861	233	.000
Fixed mean score	234	3.50	0.000	0.000			

t (233)1.96, P < 0.05

The test revealed that Athletes' use of drugs is perceived to have significant influence on the officiating of NICEGA competitions. The calculated t-value (15.861) is higher than the critical value of 1.96 and the observed level of significance is 0.000 (P < 0.05). This means that drug use by Athletes tend to disrupt the officiating of NICEGA Competitions. Therefore, the null hypothesis that there is no significant influence of drug use by Athletes in Colleges of Education on the officiating of NICEGA Competitions is rejected.

Sub-Hypothesis II:

There is no significant influence of drug use by Athletes in College of Education on the performance of participants during NICEGA competition in North Central Geo-Political Zone, Nigeria

This hypothesis was tested with the scores in Table 4.3 where the influence of drug use by Athletes on their performances in the competitions was assessed. The one sample t-test was used in the test for reasons advanced in the test of the major hypothesis above. The result of the test is summarized in Table 4.8.

Table 4.8: One sample t-test on influence of drug use by Athletes on their performances in the NICEGA competitions.

Variables	N	Mean	Std. Deviation	Std. Error	t-value	DF	P
Performance	234	3.43	.80658	.05273	0.243	233	.808
Fixed mean score	234	3.50	0.000	0.000			

t(233) =1.96, P > 0.05

The result in the table revealed that Athletes' use of drugs did not significantly influence their performances in the NICEGA competitions. This is indicated with a calculated t-value of 0.243 in the table and it is lower than the critical value of 1.96. The observed level of significance for the test is 0.808 (P > 0.05). This means that use of drug by Athletes does not necessarily affect their performance during NICEGA competitions. This is contrary to the notion that drug use enhances performance of Athletes. The null hypothesis that there is no significance influence of drug use by Athletes in Colleges of Education on the performance of participants in NICEGA competition in North Central Geo-Political Zone, Nigeria is therefore upheld/accepted.

Sub-hypothesis III:

There is no significance influence of drug use by Athletes in College of Education on their health during NICEGA competition in North Central Geo-Political Zone, Nigeria.

The influence of drug use by the Athletes on their health was assessed in Table 4.4. In the test of this hypothesis, the one sample t-test was used to compare the observed mean score for the variable with the fixed mean which

will indicate whether the respondents were of the opinion that drugs use has significant influence on the Athletes' health or not. The result of the one sample t-test used in the test is indicated in Table 4.9.

Table 4.9: One sample t-test on influence of drug use on the health of the Athletes in NICEGA competitions.

Variables	N	Mean	Std. Deviation	Std. Error	t-value	DF	P
Health	234	3.8855	.59429	.03885	9.922	233	.000
Fixed mean score	234	3.50	0.000	0.000			

t(233)=1.96, P < 0.05

The result in the table 4.9 shows that the use of drugs by Athletes in the Colleges of Education had significant influence on their health during the NICEGA competitions. The calculated t-value (9.922) is higher than the critical value of 1.96. The level of significance observed for the test is 0.000 (P < 0.05). This means that the null hypothesis that there is no significant influence of drug use by Athletes in Colleges of Education on their health during NICEGA competition in North Central Geo-Political Zone, Nigeria is therefore rejected.

Sub-Hypothesis IV:

There is no significant influence of drug use by Athletes in Colleges of Education on the conflict among participants in NICEGA competition in North Central Geo-Political Zone, Nigeria

To test this hypothesis, the mean scores in Table 4.5 where the influence of drug use by Athletes on the conflicts during the competitions were

assessed were subjected to a one sample t-test. The result of the test is presented in Table 4.10

Table 4.10: One sample t-test on influence of drug use by Athletes in Colleges of Education on the conflict among participants in NICEGA competition

Variables	N	Mean	Std. Deviation	Std. Error	t-value	DF	P
Conflicts	234	4.02	.58429	.03820	13.493	233	.000
Fixed mean score	234	3.50	0.000	0.000			

t(233) =1.96, P < 0.05

In the table, the calculated t-value is 13.493 while the critical value of t is 1.96. The observed level of significance for the test is 0.000 (P < 0.05). Going by the calculated t-value and the level of significance as indicated, it shows that there is a significant influence of drug use by Athletes on conflict among participants in NICEGA competitions in North Central Geo-Political Zone, Nigeria. The null hypothesis that there is no significant influence of drug use by Athletes in Colleges of Education on the incidences of conflict among participants in NICEGA competitions in North Central Geo-Political Zone, Nigeria is thus rejected.

4.4 Discussion

In the analysis of the data collected for this study in relation to influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition, certain facts have emerged.

In the test of the major hypothesis of the study, it was found out that there was a significant influence of drug use by Athletes on their behaviour during NICEGA competitions. This finding agrees with Terry and Jackson (1985) where they reported that behaviour of Athletes during competitions as a result of influence of drug use had disrupted competitions at several intervals and in some cases brought about inconclusiveness of the competitions.

The influence of drug use by the Athletes on officiating of NICEGA competitions was also tested on sub-hypothesis I. The result revealed that the use of drug had significant influence on the officiating of NICEGA competition. This finding agrees with Leonard (1988) who stated that most occurrences of violence during sports competitions originate from players who had taken drugs. This had adversely affected officiating of various competitions.

The influence of drug use by Athletes on their performance was tested in sub-hypothesis II. The result of the test revealed that Athletes use of drugs during NICEGA competitions did not significantly influence their performances. This finding agrees with Williams (1991) who reported that most psychomotor functions related to athletic performance are impaired and not improved by alcohol. He further reported that alcohol does not enhance strength, power, speed, muscular endurance or cardiovascular endurance.

Another finding from sub-hypothesis III shows that the use of drug by Athletes during NICEGA competitions had significant influence on their health.

This finding is in line with Yeun (2000) who reported that use of drug by Athletes not only endanger one's health but also lead to increase in number of deaths.

Another finding from sub-hypothesis iv was the resulting conflict engendered by drug use by Athletes during NICEGA competitions. The test of this hypothesis revealed that there is significant influence of drug use by Athletes on the conflict among participants during NICEGA competitions. This shows that use of drug by Athletes significantly influence the level of conflicts among participants during NICEGA competitions. They exhibit such unruly behaviours to cause threat or physical hurt on others before, during or after sporting competitions. This finding agrees with Aminu (1993) who reported that conflict during sports competition is as a result of Athletes who are under the influence of drug.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The desire to win at all costs by both Coaches and Athletes have imposed extreme pressures on participants in competitive sports all over the world. As a result of this desire, the problems of using drugs to enhance performances by Athletes have increased. The problem is that the use of drugs is accompanied with a myriad of problems among which some could be very devastating for the individual and the society. Therefore influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competition was investigated in this study. Among the variables on which the influence of drug use were investigated were Athletes' behaviours, performances, officiating of the NICEGA competitions, health of the Athletes and the conflicts resulting from the use of such drugs by Athletes.

The study was structured into five chapters in order to effectively carry out the research. Chapter one presents the background and purpose of the study. The statement of the problem and the research questions including the hypotheses formulated for the study. Other aspects of the chapter were basic assumptions, significance of the study, scope or delimitation and limitations. Chapter two consisted of the review of the related literatures to the study. Chapter three gave the methodology used in the study. The statistical analysis and interpretation of the findings from the analyzed data were presented in chapter four. These consisted of the analysis of the demographic variables of the respondents and their opinion on the influence of drug use on Athletes' behaviour during NICEGA competition.

The results from the test of the hypotheses and the analysis of the respondents' opinion on the variables revealed that drug use by Athletes of the Colleges of Education have adverse significant influence on the NICEGA competitions. Among the components of the competitions in which these adverse influence of drug use were observed included Athletes' behaviours, performance by individual and groups during the game, the health of the individual Athletes concerned officiating of the competition and the resulting conflicts created because of the drug influence by the Athletes.

5.2 Conclusion

The study investigated the influence of drug use on Athletes' behaviour during Nigeria Colleges of Education Games Association (NICEGA) competitions in North Central Geo-Political Zone, Nigeria. A total of 234 Athletes selected from different competitive sports selected through a stratified sampling procedure were involved in the study. Variables on which the influence of drug use on the competitions investigated were: Athletes' behaviour, officiating of NICEGA competition, performance of the individual Athletes, influence of drug use on the health of the Athletes and the conflicts resulting among the participants during the competitions. It was also found out from the analysis of the data that drug use adversely influenced the overall NICEGA competitions. At the individual level, it had adverse influence on the behaviours, officiating, performance, health of Athletes and resulted in conflicts during the competitions. Though it was found out that use of drugs by Athletes enhances performances of the individual and also gives recognitions to such individuals, the resulting disqualification and suspension coupled with the

stripping of such medals from the concerned Athletes all amounted to negative influence.

5.3 Recommendations

Based on the findings of this study, the researcher recommends as follows:

1. Sport organizers and administrators should de-emphasize winning at all cost by laying more emphasis on intrinsic motivation during awards. This will give all Athletes opportunity to freely participate in sport competitions without using drug to enhance their performance.
2. That the respective agencies responsible for the control of drugs in the Nigerian Colleges of Education during the games should not only concentrate on detecting drug use by Athletes but should wage an enlightenment campaign against it among prospective Athletes and officials. This will help to curtail some of the drug induced behaviours, such as violence and conflicts during sports competitions.
3. The College authorities should ensure stiff penalties for Athletes and officials who are involved in the use of drug which may lead to disruptions in officiating during sports competitions. This will serve as a deterrent to other prospective users.
4. Athletes who exhibited any form of unruly behaviour as a result of drug use during Sports competitions should be punished by their institutions and the College from where the student(s) hail from should be sanctioned.

5. Athletes from all the participating institutions should be educated about the health implications of drug use during sports competitions.

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APPENDIX A

……. 13th May, 2011

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Dear Sir/Madam,

REQUEST TO VET A QUESTIONNAIRE

The bearer, **IKWUKA, FRANCA NKOLI** with Registration Number M.Sc/Educ/9071/2009-2010 is a Postgraduate student of this Department. She is currently conducting a research on **"Influence of Drug Use on Athletes' Behaviour During Nigeria Colleges of Education Games Association (NICEGA) Competition in Nigeria".**

On the basis of your professional expertise and experience, you have been selected to serve as jurors to critically vet the questionnaire and make the necessary corrections for its improvement.

I therefore request you to kindly go through the questionnaire thoroughly and make your suggestions wherever necessary and return it to the researcher as soon as possible.

Thanking you.

Yours faithfully,

Prof. A.I. Kabido
(Major Supervisor)

APPENDIX B

QUESTIONNAIRE

Dear respondents,

Please kindly fill in the necessary information needed on this questionnaire to carry out a research on the influence of Drug use on Athletes' Behaviour During Nigeria Colleges of Education Games (NICEGA) competition in Nigeria. All information given on the questionnaire should be kept confidential.

The questionnaire contains six (6) sections: Section A is on demographic characteristics, Section B is on the use of drug and behaviour of Athletes in Colleges of Education during NICEGA competition in Nigeria, Section C is on the use of drug by Athletes in Colleges of Education and officiating of NICEGA competition in Nigeria, Section D is on the use of drug by athletes in Colleges of Education and their health during NICEGA Competition in Nigeria, while Section E is on the use of drug by Athletes in Colleges of Education and their performance during NICEGA competition in Nigeria and section F is on the use of drug by Athletes in Colleges of Education and conflict during NICEGA competition in Nigeria.

Please read the questions below and tick (√) the option you considered best as applied to you.

1. Gender: a) Male ( ) (b) Female ( )
2. Age: (a) Less than 20 years ( ) (b) 20 – 24 years ( ) (c) 25 – 29 years ( ) (d) 30 – 34 years ( ) (e) Above 35 years ( )
3. Your sport event: (a) Athletics ( ) (b) Football ( )
   (c) Volleyball ( ) (d) Handball ( ) (e) Hockey ( )

4. Competitive sport experience: (a) 1 – 2 years ( )

(b) 3 – 4 years ( ) (c) 5 – 6 years ( )

(d) 7 – 8 years ( ) (e) Above 9 years ( )

5. My level of study: (a) Pre-NCE ( ) (b) NCE I ( )

(c) NCE 2 ( ) (d) NCE 3 ( )

KEY:

Use the following key for the table below:

SA - Strongly agree

A - Agree

U - Undecided

D - Disagree

SD - Strongly disagree

Section B: Use Of Drug And Behaviour Of Athletes In Colleges Of Education During NICEGA Competition In Nigeria

NO	QUESTIONS	SA	A	U	D	SD
6.	Use of drug by Athletes in Colleges of Education could lead obnoxious (Unpleasant behaviour such as violence crimes during NICEGA competition in Nigeria.					
7.	Use of drugs by Athletes in Colleges of Education could lead to crisis such as aggression and fighting among participants during NICEGA competition in Nigeria.					
8.	Use of drug by Athletes in Colleges of Education during NICEGA competition could lead to deviant behaviour such as forcible rape on the female participants which could cause HIV and other sexual transmitted infections during NICEGA competition in Nigeria.					

NO	QUESTIONS	SA	A	U	D	SD
9.	Use of drug by Athletes in Colleges of Education could increase the rate of disturbances in officiating during NICEGA competition in Nigeria					
10.	Use of drug by Athletes in Colleges of Education could lead to non-adherence to rules of the competition and lack of respect to the sport officials during NICEGA competition.					
SECTION C: Use Of Drug By Athletes In Colleges Of Education And Athletes' Achievement in NICEGA Competition						
11.	Use of drug by Athletes in Colleges of Education could increase the chances of winning in NICEGA competition in Nigeria.					
12.	Use of drug by Athletes in Colleges of Education could increase the number of medals won by participants during NICEGA competition in Nigeria.					
13.	Use of drug by Athletes in colleges of Education could increase the number of trophies and cash award won by Athletes during NICEGA competition.					
14.	Use of drug by Athletes in Colleges of Education could make the participants gain more recognition and also creates room for talent identification because of Athlete's high level performance during NICEGA competition.					
15.	Use of drug by Athletes in Colleges of Education during NICEGA competition erodes the credibility of the competition.					

SECTION D: **Use Of Drug By Athletes In Colleges Of Education And Their Health During NICEGA Competition**						
16.	Use of drug by Athletes in Colleges of Education could increase the rate of injury on the participants during NICEGA competition in Nigeria.					
17.	Use of drug by Athletes in Colleges of Education could increase the endurance capacity of Athletes during NICEGA competition in Nigeria.					
18.	Use of drug by Athletes in Colleges of Education could reduce fatigue and boredom during NICEGA competition in Nigeria.					
19.	Use of drug by Athletes in Colleges of Education during NICEGA competition could cause death as a result of burst blood vessels in the brain or heart failure.					
20.	Use of drug by Athletes in Colleges of Education produces energy to the athlete's working muscles during NICEGA competition.					
SECTION E: Use Of Drug By Athletes In Colleges Of Education And Their Performance During NICEGA Competition In Nigeria.						
21.	Use of drug by Athletes in Colleges of Education during NICEGA competition could enhance their performance.					
22.	Use of drug by Athletes in Colleges of Education during NICEGA competition could place an Athlete at undue advantage in terms of performance over his mate who is not on drug.					
23	Use of drug by Athletes in Colleges of Education could affect Athlete's sense of judgement negatively during NICEGA competition.					

24.	The over dose or under dose use of drug by Athletes in Colleges of Education could hamper their performances in NICEGA competition					
25.	Use of drug by Athletes in Colleges of Education during NICEGA competition could boost athlete's ego and makes him feel unnecessarily more superior than other athletes who are not on drug.					
SECTION F: Use Of Drug By Athletes In Colleges Of Education And Conflict During NICEGA Competition In Nigeria.						
26.	The detection of performance enhancing drug in an athlete during NICEGA competition could lead to conflict before, during and after competition among Athletes.					
27.	Use of drug by an Athletes in a particular College of Education during NICEGA competition could lead to conflict among officials from other Colleges of Education.					
28.	Use of drug by some Athletes in Colleges of Education could lead to conflict between the Athletes and officiating officials.					
29.	Use of drug by the Athletes in Colleges of Education could lead to conflict between a coach and the Athletes during NICEGA competition.					
30.	There could be conflict between Athletes and officials in the result presented and declared as a result of use of drug by an Athletes during NICEGA competition.					

20TH June, 2011

To whom it may concern .

Sir,

LETTER OF INTRODUCTION

The researcher, Ikwuka, Franca Nkoli is a student of the above named Department, specializing in Masters of Science (M.Sc) Sports Management in partial fulfilment of the requirement for the award of Master Degree she is conducting a research on "**INFLUENCE OF DRUG USE ON ATHLETES' BEHAVIOUR DURING NIGERIA COLLEGES OF EDUCATION GAMES ASSOCIATION (NICEGA) COMPETITION IN NIGERIA"**.

In the light of the above, she seeks your co-operation in obtaining necessary information relation to her work problem and would appreciate it very much if you would permit her to use subjects in your institution for her study with their consent.

Prof. A.I. Kabido
Major Supervisor