USMANU DANFODIYO UNIVERSITY, SOKOTO

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DETERMINANTS OF PSYCHOACTIVE SUBSTANCE USE AMONG LONG DISTANCE VEHICLE DRIVERS IN SOKOTO, NORTH-WESTERN NIGERIA

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BY

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DEDICATION

I dedicated this work to my late father Alhaji Hamzat Irewole.

CERTIFICATION

We certify that this work was carried out by DrHamzatAbdullahi (Admission No: 14210704008) of the Department of Community Health, UsmanuDanfodiyo University, Sokoto, Nigeria, under our supervision.

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TABLE OF CONTENTS

LIST OF TABLES

LIST ABBREVIATIONS, DEFINITIONS AND GLOSSARIES

AJP	American Journal of Psychiatry
BAC	Blood Alcohol Concentration
BC	Before Christ
CADS	Core Alcohol and Drug Sury
CBN	Central Bank of Nigeria
CNS	Central Nervous System
CRA	Comparative Risk Analysis
DRA	Dopamine Receptor Antagonist
ESPAD	European School Survey Project on Alcohol and Other Drugs
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
GABA	Gamma Amino Butyric Acid
FCT	Federal Capital Territory
FGC	Federal Government College
FRSC	Federal Road Safety Corp
IDU	Injecting Drug Use
LDD	Long Distance Drivers
LDV	Long Distance Vehicle
LSD	Lysergic Acid Diethylamide
NAFDAC	National Agency For Food and Drug Administration and Control
NHSDA	National Household Survey on Drug Abuse
NPC	National Population Commission
NTA	Nigerian Television Authority
NURTW	National Union of Road Transportation Workers
PCP	Phencyclidine
SACENDU	South African Community Epidemiology Network on Drug Use
SPSS	Statistical Package for the Social Sciences
SSMRA	Sokoto State Ministry of Religious Affairs
UDUTH	Usmanu Danfodiyo University Teaching Hospital
UKCIA	United Kingdom Cannabis Internet Activist
UNODC	United Nations Office on Drugs and Crime

UNODCCP	United Nations Office for Drug Control and Crime Prevention
USA	United States of America
WHO	World Health Organization

ABSTRACT

The use of psychoactive substances is a global phenomenon with a lot of adverse effects on the users especially long distance vehicle drivers. This study was therefore conducted to determine the determinants of psychoactive substances used by long distance drivers. It was a cross-sectional descriptive study. Multistage sampling technique was used to select 289 commercial long distance drivers at inter-state motor parks in Sokoto metropolis. Data was collected using a semi-structured interviewer administered questionnaire and was analyzed by IBM SPSS version 20. The mean age of respondents was 40.63±10.09years; all were male, majorities were Muslims (94.61%) and married (90.41%). Most had fair level of knowledge on harmful effects of psychoactive substance (50.7%).The predominant substance used was cigarette (47.0%). Having believed that substance use affect health negatively (OR = 5.615, 95% CI=2.308 – 13.658, p= 0.00), age (OR=0.343,95%CI=0.195-0.606,p=0.00)and religion (OR = 0.096, 95% CI=0.026 – 0.358, p= 0.00) were the main predictors of cigarette smoking, kola nut. They had fair level of knowledge and reported using cigarette, kola nut, local stimulant tea, marijuana and alcohol, which were mostly accessed from street vendors. There is need for more health education of long distance drivers by public health physicians on use of psychoactive substances.

CHAPTER ONE

1.0 INTRODUCTION

1.1. Background to the Study

Psychoactive or psychotropic substance is a chemical substance that acts primarily upon the central nervous system where it alters brain function, resulting in temporary changes in perception, mood, consciousness, and behaviour. The use of these substances by vehicle drivers is a common occurrence globally and when they are taken in or administered into one's system affect mental processes (WHO, 2009). This practice involves the use of virtually all substances known today. Concerns are growing over the incidence of road traffic accidents in drivers who drive under the influence of these substances, especially alcohol and cannabis (Makanjuola *et al*., 2007).

Although road crashes may have multiple interacting causal factors, some accident culpability and responsibility analysis had demonstrated that alcohol intake while driving correlates positively with road traffic accidents. Substance use could be a regular activity in a driver who then takes the substance while driving as was observed in day-to-day vehicle drivers or it could be a routine behaviour related to the occupation of driving. The latter pattern of drugged driving is commonly practiced in Nigeria and other parts of the world (Laosebikan and Baiyewu, 2009).These drivers are subjected to countless factors that influence their professional practice, among which the intake of psychoactive substances stands out. These substances are used to prevent sleep during the trips, stimulate energy and increasing willingness for work and socialization. However, the use of these substances may cause harmful effects to the individuals and to society (Labat *et al*., 2008).

There is historical evidence of the production of alcoholic beverages as early as 10,000 BC (Neolithic Period). The wine jars from Jiahu China which date back to centuries BC, is an evidence of the long standing existence of alcoholic beverages made from fermenting rice, honey, and fruit. A variety of alcoholic beverages were used in China since Paleolithic times. Alcohol, known in Chinese as Jiu was considered a spiritual food rather than a material (physical) food, and extensive documentary evidence attests to the important role it played in their religious life (McGovern, 2004).

Alcohol gained prominence as a product to boost the economic power of several nations in the past and as a means of showing hospitality. It has religious significance as it is used in religious worship, being offered to gods, in ceremonies, marriages, celebration of victories in wars and other combats, and as a drug to induce anaesthesia. In sub-Saharan Africa, other alcoholic beverages like palm-wine played important role in many African societies, and other alcoholic beverages produced through fermentation of sorghum, millet, and more recently maize or cassava was common in most parts of Africa (Okpataku, 2006).

Tobacco is a plant that grows natively in North and South America. As early as 1 B.C., American Indians began using tobacco in many different ways, such as in religious and medicinal practices and was believed to be a cure-all medicine. During the 1600's, tobacco was so popular that it was frequently used as money and was literally "as good as gold" (Alvarez *et al*., 2007). This was also a time when some of the dangerous effects of smoking tobacco were being realized by some individuals (James, 2012). Global use of alcohol, tobacco, and other controlled substances is growing rapidly, and contributing significantly to the global burden of disease. Smoking is spreading rapidly in the developing countries both in men and among women also. Currently, 50% of men and 9% of women in the developing countries smoke, as compared with 35% of men and 22% of women in the developed countries (Mackay and Eriksen, 2002).

Cannabis on the other hand is an indigenous plant to Central and South Asian people and the cannabis plant has been used in China, India, and the Middle East for approximately 8000 years for its fiber and as a medicinal agent (Sadock and Sadock, 2007). However, a Chinese treatise on pharmacology attributed to the emperor Shen Nung, and alleged to date from 2737 B.C. contains probably the earliest reference to cannabis and its potential as a medicine. The United Kingdom Cannabis Internet Activist (UKCIA) recorded that cannabis occupies fourth place in worldwide popularity among the mind-affecting drugs-preceded only by caffeine, nicotine and alcohol (UKCIA, 2014).

It was also believed that the remains of coca leaves have been found with ancient Peruvian mummies, and pottery from the time period depicts humans with bulged cheeks, indicating the presence of something on which they are chewing. The coca leaves are indigenous to the Peruvian communities and it has been suggested that the content of the bulged cheeks could have been coca leaves. The South American peoples have chewed the leaves of Erythroxylon coca for over ten centuries, a plant that contains vital nutrients as well as numerous alkaloids, including cocaine (McGovern, 2004). The coca leaf was, and still is, chewed almost

universally by some indigenous communities. Coca has been used as a medicinal plant, a ritual agent, a local anesthetic and as content in beverages in the past (Nadeem *et al*., 2009). It is a major illicit drug of abuse involved in trans-border trafficking and drug-related criminal activities worldwide and it is therefore essentially for both researchers and medical personnel's attention and intervention to find a solution to the ongoing menace of the use of illicit drugs or psychoactive substances.

Mechanism of Action of Psychoactive Substances

Psychoactive substances have different ways of acting on the brain to produce their effects. They share similarities in the way they affect important regions of the brain involved in motivation, and this is a significant feature with regard to the theories of the development of substance dependence. By understanding the acute and chronic effects of drug action, targeted therapies can be developed, and questions concerning how and why some drugs can be used by certain individuals without leading to dependence, whereas others lead to chronic dependence and relapse, can be better understood (Cardinal, 2002).

However, there are mechanisms which are common to some of them, these are; they act through binding to receptors for which there are endogenous ligand. They can competitively bind to these receptor sites thereby causing an agonistic action identical to the effects that are recognized for the endogenous molecule, a potentiated or antagonistic action, e.g. Cannabis bind to endocannabinoid receptors in the brain; Nicotine binds and activates nicotinic acetylcholine receptors; the opiates bind to the opioid receptors to which naturally occurring peptides, endorphins and enkephalins, bind to, and alcohol, benzodiazepines and barbiturates interacts with gamma amino butyric acid (GABA) causing an inhibitory effect. Secondly, psychoactive substances affect the process of neurotransmission by inhibiting reuptake causing the accumulation of neurotransmitters in the synapse or cause the release of neurotransmitters for example; cocaine and amphetamine-type stimulants cause the release or prevent the uptake of the biogenic amines at the synaptic area. Thirdly, the psychoactive substances as a group, to various degrees cause the release of dopamine in the nucleus accumbens of the brain. The nucleus accumbens is a very important brain area involved in motivation and learning, and signaling the motivational value of stimuli (Robbins and Everitt, 1996). This mechanism partly accounts for the positive reinforcement of the drug use experience, the persistent substance-seeking and maladaptive behavior associated with drug use (Robbins and Everitt, 1996).

According to Odebunmi (1994), in many societies, “excessive alcohol drinking and drug abuse are considered statistically abnormal from the point of view of disease and health”. Those who engage in drug abuse and alcoholism are, therefore, considered abnormal with conditions of emotional maladjustment.

Various types of psychoactive substances and their mechanism of actions

Psychoactive substances or drugs have been classified in different ways by different authors. The numbers of substances which are actually abused or which have high abuse potentials are very numerous. According to Abdullahi, (1998), it is very difficult to make a universally acceptable classification of these substances because some authors classified such substance in four categories while others classified it into five. Drugs or psychoactive substances share characteristics with more than one group and therefore it is very difficult to place them properly in a clear cut compartment. Ogunremi and Rotimi, (1979), to mention a few, have however classified drugs into five groups as shown below:

i. Opiate and Narcotics
ii. Stimulants (Amphetamines)
iii. Hallucinogens
iv. Cannabis
v. Sedatives/ Hypnotics

Attempts have been made to classify the psychoactive substances. Previous methods employed include classifying them according to their effects such as depressants, stimulants etc. NAFDAC (2004) categorized these substances as follows: stimulants, hallucinogens, narcotics, sedatives, miscellaneous and tranquilizers.

The problem with the classification is that, most psychoactive substances (drugs of abuse) have multiple actions, a drug such as alcohol causes euphoria at low dose and then with increasing intake may depress‘ the brain. Under this system, some drugs do not have a

predominant effect to allow them fit into the common rubrics. The most common classification of psychoactive substances are Depressants e.g. Alcohol, Sedatives/hypnotics, volatile solvents, Stimulants e.g. Nicotine, Cocaine, Amphetamines, Ecstasy, Khat, and Caffeine and Opioids e.g. Morphine and Heroin, Hallucinogens e.g. PCP, LSD and Cannabis (WHO, 2004).

Stimulants

These are substances that directly act and stimulate the central nervous system. Users at the initial stage experience pleasant effects such as energy increase. Their limited medical uses include the reduction of fatigue or mild depression. The stimulants often abused by adult men and women include amphetamine, caffeine concentrates, kola nut, coffee, tea, cocaine, volatile solvents or inhalants that provide euphoria, emotional dis-inhibition and perpetual distortion of thought to the user. The main sources are glues, spot removers, tube repair, perfumes, chemicals etc. In general, these classes increase human alertness and decrease fatigue. Apart from their behavioural effects, some of them present other important pharmacological properties. The health consequence of stimulant are similar when taken in small doses, they produce a sense of exhilaration (euphoria, increased alertness and reduction of fatigue and hunger. Larger doses intensify these feelings and may lead to bizarre erratic behaviour, hostility and violence. These behavioural disturbances are accompanied by physical symptoms of over stimulation of the sympathetic nervous system such as accelerated heart beat, raised blood pressure, temperature, and fast breathing. Taking them in higher doses could also lead to reactions such as agitation, restlessness, delirium, hallucination and delusion. Death may result from respiratory arrest, cerebral heamorrhage and hyperthermia. When used repeatedly over a long period, tolerance and dependency symptoms will occur. Chronic cocaine use may also produce typical hallucinations and delusions, states of fluctuation between periods of depression and apathy (Osa and Egbochukwu, 2012).

Hallucinogens

These are chemical diverse group of substances that consistently produce changes in thought, perception and mood. These drugs alter the sensory processing unit in the brain. Thus, producing distorted perception, feeling of anxiety and euphoria, sadness and inner joy, they normally come from marijuana, LSD etc. While some of the substances excite nerve activity and others inhibit it. These substances of influence include; Lysergic acid diethylamide (LSD), mescaline, psilocybin and psilocin found in mushroom. The primary sources of these illicit substances are clandestine, laboratories (Odebunmi 1994).

LSD is an extremely powerful hallucinogen that was popular in the 1960s and is becoming popular once again. It is a white powder which can also occur in the form of a clear liquid. It is produced from lysergic acid, a substance derived from the ergor fungus which grows on rye. It is an odourless, colourless chemical manufactured substance, street names for the substances include, acid, blotter acid, microdont and white lightening. It was initially used for medical purposes but later used for non medical and recreational purposes. It can be taken orally, off paper, absorbed through the skin or absorbed in sugar cubes (Dinner-Stammer, 1991).

The mental effects may be quite variable even in the same person at various occasions. They produce effects that one would observe in manic-depressive psychoses and schizophrenia. Hallucinogens have the characteristics of dependence and tolerance and cross-tolerance to each other (Maduako and Aguwa, 2002). There is little physiological arousal or sedation (DH, 2003).

The effects vary greatly according to the dosage, the personality of the user and the condition under which the drug is administered. The major effects are marked visual alteration, objects are perceived with different meanings, tremors and increase in blood pressure. LSD causes “flashback” days or months after the administration of the last dose (Mireku, 2002). This can be extremely frightening as they may occur unexpected when a person is executing a crucial skill such as driving a vehicle.

Opiates and Narcotics (Analgesics)

These psychoactive drugs relieve pains, induce sleeping and they are addictive. They are substance obtained from the opium poppy plant. They include heroin, Morphine, codeine, pethidine, etc, they are used clinically largely for their pain (analgesic) and cough relieving (anti tissue) properties. Of these drugs, the one which is currently causing a lot of concern is Heroin. They all work by binding opiate receptors in the nervous system (Acuda, 1988).

In spite of the foregoing, the use of psychoactive substance and driving has continued unabated in Nigeria. The Federal Road Safety Corp and other civil organizations have continued to put up campaigns against drunk-driving. The enforcement aspect against drunk-driving has, unfortunately, been unsuccessful as there is no legal basis for determining the legal limits of blood alcohol concentration (BAC) in the Nigerian Traffic laws (Welcome and Pereverzev, 2010).

Besides the notable and preventable public health burden, substance use disorders result in great costs and suffering for individuals and families, urgently calling for improved strategies of effective prevention and intervention. From a more theoretical point of view, substance use and addiction are intriguing and important behavioral phenomena in need of explanation. The acute effects of psychoactive substances, mediated by neurochemical pathways in the brain, are a case in point of neurobiological explanations of mood, consciousness and perception (Breedlove *et al.,* 2007).

It has also been reported that commercial vehicle drivers, in particular, young commercial drivers engaged in long distance journeys are major contributor to road traffic accident in Nigeria, and their impact on economic losses are high. In view of this, there is the need to explore ways of mitigating the sequelae of such psychoactive substance used in our society especially among long distance vehicle drivers (Sunmola, 2005).

1.2. Problem Statement

Global use of alcohol, tobacco, and other psychoactive substances is growing rapidly, and contributing significantly to the global burden of disease. The association between psychoactive substance use and accidental injury or death has been acknowledged. In the U.K for instance, alcohol accounts for 50,000 deaths per year and up to 500,000 hospital admissions annually (Makanjuola *et al.,* 2014). In the United States of America, about 10,000deaths were attributed to use of alcohol by young people (New York Times, 2013).United Nations Office on Drugs and Crime (UNODC) formerly named United Nations Office for Drug Control and Crime Prevention (UNODCCP) reported that the herbal form of marijuana is the most abused substance in West Africa because marijuana is locally cultivated all over the region and it is therefore affordable (UNODC, 2011).

The World Health Organization has reported a link between drivers' hazardous use of alcohol and road traffic accidents in Nigeria. The use of psychoactive substances such as cocaine, alcohol, pentazocine, heroin, cannabis etc is a global phenomenon with a lot of adverse effects on physical and mental health of individual and the society. Long distance vehicle (LDV) drivers are vulnerable to the use of these substances most specifically alcohol, cannabis which can result to the health hazards such as mental illness, chronic liver failure etc and the safety of the commuters e.g. Road traffic accident which in turn associated with loss of properties, damage to the infrastructures, loss of body parts and sometimes death(WHO,2009).

1.3. Rationale of the Study

Long distance drivers are usually under more stress than their counterparts plying intra-city roads. In Nigeria, majority of them are owners of the vehicles they drive (Moruf and Lawal, 2006); while some drivers make daily or weekly monetary delivery to the owners of the vehicle they drive (Abiona *et al*., 2006). They face the highway on top speeds on daily basis; sometimes making more than one trip per week on their usual route and night driving is also common (Omolase *et al*., 2011).

Consequently, in order to reduce or minimize this stress, some drivers believe that the use of substances such as Alcohol, Cigarette, Kola nut, Marijuana, and other central nervous system (CNS) agents such as amphetamines will significantly improve their performance and keep sleep at bay for as long as possible (Adekoya *et al*., 2011).

Consumption of psychoactive substances before or while driving has the ability to impair cognitive functions of the drivers and reduces the sense of judgment. It also affects their perception and interpretation of bad driving which could lead to the occurrence of road traffic accidents (Donna *et al*., 2010).

Several national and multinational surveys have provided data on drug use in different groups. For example, in the USA, the National Household Survey on Drug Abuse (NHSDA) has served as a source of useful information on drug use in the general population, and Monitoring the Future Project provides data on drug use by young people. The European School Survey Project on Alcohol and Other Drugs (ESPAD), an initiative of the Council of Europe, has become a data source on youth drug use for many European countries.

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) also provides regular data on drug use (including hazardous methods of use, such as injecting drug use (IDU)) in European countries. While national surveys of youth and adults are held on a regular basis in some countries, but reliable data on drug use is generally lacking in most developing countries. Projects such as the South African Community Epidemiology Network on Drug Use (SACENDU) and its related regional network have been started to address this lack of information.

Although, several studies have been conducted in other regions of the country (e.g. Ibadan, Ilorin, and Enugu) (Lasebikan, 2010; Makanjuola *et al*., 2007; Aniebue and Okonkwo, 2008) but none has been done in Sokoto. Hence, there is the need for this study to be carried out in this part of the country to complement the data from the sources mentioned above since Sokoto

State is bordered by many states in Nigeria and even some other motorable African countries such as Republic of Niger, Benin and Togo.

It is hoped that the findings will be useful in planning preventive measures against psychoactive substances use and possibly help in the control of mental health problems, road traffic accidents that may develop as a result of their consumptions among long distance vehicle drivers in Sokoto, Sokoto State, Nigeria.

1.4. Aim and Objectives of Study

1.4.1. Aim of the study: The aim of this study was to assess the determinants of psychoactive substance use among long distance vehicle drivers in Sokoto metropolis.

1.4.2. Specific objectives: The specific objectives of this study were:

1. To assess the level of Knowledge of Respondents on harmful effects of psychoactive substances.
2. To determine the various types of psychoactive substance in use by long distance drivers in Sokoto.
3. To determine the accessibility of the psychoactive substances to long distance driver in Sokoto.
4. To identify the health effect of the psychoactive substance used among respondents.
5. To identify the determinants of psychoactive substance use among long distance drivers in Sokoto.

1.5. Research Questions

The research questions that were explored in this study were:

1. What is the level of knowledge of respondent about harmful effect of psychoactive substances?
2. What are the various types of psychoactive substance use among long distance vehicle drivers in Sokoto metropolis?
3. How are the drivers accessing psychoactive substances?
4. What are the effects of those psychoactive substances used on the long distance vehicle drivers in Sokoto?
5. What are the determinants of psychoactive substance use among long distance drivers in Sokoto?

1.6. Definition of terms

Accessibility	It is used for availability, handiness, convenience and a way of getting something.
Affect	The tone of emotion.
Co-morbidity	Medical conditions existing simultaneously
Co-occurrence	Used interchangeably with co morbidity
Determinant	It is referred to as the crucial or cognitive factor that determines something.
Effect	Used for the consequences of something; negative or positive.
Primary Mental Disorder	Mental disorder other than psychoactive substance use.
Psychoactive substance	Chemical substances which cross the blood brain barrier and acts primarily upon the central nervous system resulting in alterations in thought, perception, mood, consciousness, cognition, and behaviour.
Relapse	The re-occurrence of mental or other disorders after a period of normal health.
Substance	Used interchangeably with psychoactive substance.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Background of Study Area

Road transportation of goods drives the economic development in several countries, especially in those with large territories and insufficient or inadequate railroad transport. Long distance drivers are the main agents in this transportation system and their activity has unique features regarding work organization, such as goals and short deadlines to achieve them, and also strenuous working hours (Girotto *et al*., 2014).

These drivers are subjected to countless factors that influence their professional practice, among which the intake of psychoactive substances stands out. These substances are used to prevent sleep during the trips, stimulate energy and increasing willingness for work and socialization. However, the use of these substances may cause harmful effects to the individuals and to society (Labat *et al*., 2008).

Some Psychoactive substances which are indigenous to Africa include Khat, a stimulant drug derived from a shrub (*Catha edulis*). It is commonly chewed by people in the horn of Africa (Gebissa, 2010). Khat-chewing is a practice usually found among people in the countries where the plant is indigenous. Khat has not been placed under international control because the scientific evidence of harm is unlikely to rise to a critical mass that would justify its illegalization. However, in the west, it is increasingly considered as a highly potent controlled substance rendering its possession, cultivation and trade illegal (Gebissa, 2010).

Similarly, Kola nut which is indigenous to tropical Africa, has its centre of greatest diversity in West Africa and is an important economic cash crop to a significant proportion of Nigerian population who are involved in kola farming, trading and industrial utilization. (Asogwa *et al*, 2006).

According to the Grand Rapids Study, it showed that driving under influence of alcohol is an important risk factor for road traffic accidents (Baby *et al*., 2009). The role of drugs other than alcohol in motor vehicle accidents, however, has not been well established. Many medicines (prescription or over-the-counter) and illicit drugs affect the nervous system. Driving under the influence of drugs other than alcohol is considered to be an increasing cause of traffic accidents worldwide (Morakinyo and Odejide, 2003). Several classes of drugs, including amphetamines, antihistamines, cannabis, hypnotics, tranquillizers and tricyclic antidepressants, have been shown to impair driving skills in laboratory tests and driver-simulation studies (Bennett and Holloway, 2005). Many observational studies have shown that drug use as determined by biological sampling among drivers is prevalent and increasing (Odejide, 2006).

There is a long tradition of research on the epidemiology of alcohol use in developed countries and we have learnt much about the distribution and determinants of drinking in different populations. For many years, researchers focused on average volume of alcohol consumption in determining the level of drinking in a particular country. Using production or sales data from official records has tended to underestimate consumption, especially in developing countries, where unrecorded consumption of locally brewed beverages is significant. In order to improve the measurement of per capita consumption, WHO has sponsored research projects in four countries (Brazil, China, India and Nigeria) to determine the level of unrecorded consumption in these countries (WHO, 2009).

It is expected that more precise estimates of alcohol use will lead to better understanding of the association between use and problems. In this regard the comparative risk analysis (CRA) project of WHO is noteworthy. The CRA uses per capita consumption data together with patterns of drinking to link use to disease burden. A patterns approach to alcohol consumption assumes that the way in which alcohol is consumed is closely linked to disease outcome. Drinking during meals, for example, is associated with less risk of problems than drinking during fiestas or drinking in public places (Rehm *et al*., 2002).

Report on Global use of Psychoactive Substances

Globally, it is estimated by the United Nations Office on Drug and Crime (UNODC) survey that between 149 and 272 million people (i.e., 3.3% to 6.1%) of the population aged 15-64 has used illicit substances at least once in the previous year, and about half this number is estimated to be current drug users, that is, having used illicit drugs at least once during the past month prior to the UNODC annual survey (UNODC, 2011). About a decade ago, the World Health Organization (WHO) estimated the extent of worldwide psychoactive substance use to be 2 billion alcohol users, 1.3 billion smokers and 185 million drug users (WHO, 2002). However, the use of psychoactive substances for which there is global effort at their control continues to be substantially lower than the use of a legal psychoactive substance such as tobacco (WHO, 2004a).

In the African region, Alcohol remains the most commonly abused drug in South Africa, followed by dagga (cannabis) and the dagga/Mandrax (white pipe) combination. South Africans consume well over 5billion litres of alcoholic beverage per year. The overall prevalence of alcohol misuse is likely to be as much as 30% among certain groups and as low as about 5% in others, and is dependent on factors such as age, gender, socio-economic status and degree of urbanization. An unprecedented international attention is drawn to West Africa‘s role as an intermediary in the cocaine trade between Latin America and Europe(Parry, 1998).

According to the UNODC‘s estimate, about a quarter of Europe‘s annual consumption of 135 to 145 tonnes of cocaine currently transits via West Africa (Stephen, 2009). In addition to the cocaine trade, West Africa is also a transit point for much smaller quantities of heroin exported from Asia to North America, as well as being a producer and exporter of cannabis products and perhaps amphetamines (Stephen, 2009).

A recent world mental health survey in Nigeria and other Sub Sahara African states reported a relatively lesser proportion of the population consuming drugs of abuse, however, Nigeria

accounted for 17% of the cumulative lifetime incidence of psychoactive substance use in that study (Degenhardt *et al*., 2008). A WHO global report on alcohol, ranked Nigeria among the top nations of adult per capita consumption of alcohol (WHO, 2004b). Other studies have also described the prevalence and pattern of drug use in Nigeria (Morakinyo and Odejide, 2003; Omigbodun and Babalola, 2004; Igwe *et al*., 2009). Psychoactive substance use has been found to be commoner in young people worldwide including Nigeria (Omigbodun and Babalola, 2004; Igwe *et al*., 2009).A survey of psychoactive substance used among commercial passenger drivers in Sokoto revealed a prevalence of (33.5%) and the substance used included marijuana, caffeine and alcohol (Yunusa and Obembe, 2012). Males tend to use the substances more than females and this accounts partly for their higher proportion in drug dependence and other problems, including being overrepresented in treatment settings for substance use disorders (WHO, 2004).

There are regional variations in drug use across the world. These differences are related to factors such as income, but not necessarily drug policy, since countries with more stringent policies towards illegal drug use were not found to have lower levels of such drug use than countries with more liberal policies to the extent that it applies, the economic viability of a nation and the ability of drug users to sustain funding their substance of choice which is related to their income as well as the local availability of the substance are important determinants of drug use (UNODC, 2011).

Illicit use of controlled substances

Data from the United Nations Office on Drugs and Crime (UNODC) show large scale seizures of cocaine, heroin, cannabis and amphetamine-type stimulants in different parts of the world. Availability of cocaine, heroin and cannabis depends on the level of cultivation in source countries and on the success or failure of trafficking organizations. However, even with increased levels of law enforcement activities, there always seems to be enough drugs available to users.

According to UNODC estimates (UNODC, 2005), about 185 million people make illicit use of one type of illicit substance or another. Illicit drug use is a predominantly male activity, much more so than cigarette smoking and alcohol consumption. Drug use is also more prevalent among young people than in older age groups.

Treatment of Psychoactive Substance Use Disorders

Drug use disorders can be chronic, sometimes a lifelong problem with characteristic relapses and an enduring course of disruption to the sufferer‘s health, family, social and occupational functioning. It is often a disorder of an individual, family, community and nation singly or in combination and consumes a great deal of resources in its management. Successful treatment of substance use disorders may involve multiple treatment strategies, the choice of which may vary for any one individual over time and may involve specialists from a variety of background. The American psychiatric association work group on substance use disorders developed the above practice guidelines for the treatment of substance use disorders and encompasses the essential elements of drug use management in current literature globally (Kebler and Weiss, 2006). Goals of treatment are initially defined with the aim of achieving total abstinence or control use. Assessment to determine the extent of drug use problems and co-morbidities Decision on the treatment setting is guided by several factors, and could be on an outpatient basis, in a hospital, residential setting, or in the community. Psychiatric management is instituted with the aim of motivating a change, establishing and maintaining a therapeutic framework and alliance, assessing safety and clinical status of the patient, managing intoxication and withdrawal states, reducing the morbidity and sequel of substance use disorders, facilitating adherence to a treatment plan and preventing relapse, providing education about substance use disorders and their treatment, and facilitating access to services and coordinating resources among mental health , general medical, and other service systems to support the patient. Somatic treatments deal with the treatment of intoxication states, withdrawal syndromes, co-morbid psychiatric conditions and giving maintenance therapies.

The American Journal of Psychiatry (AJP) reported that psychosocial treatments provide cognitive behavioral therapies, other behavioral therapies such as contingency management, community reinforcement, Psychodynamic and interpersonal therapies, group therapy, family therapy, and self help group approaches as may be required (AJP, 1995; Cardinal, 2002).

2.2. Knowledge of Harmful Effect of Psychoactive Substance

It is assumed that having adequate knowledge of the risks associated with substances use will reduce the rate at which people consume them. Lack of knowledge leaves people exposed to substance use while an awareness of the relevant facts allows them to choose healthy lifestyles through the ability to resist social pressure to use drugs (Roe and Becker, 1942).

Atkin *et al*, (1992) asserted from a study carried out in United Arab Emirates estimated that 30% of current smokers did not know that smoking was harmful to their health compared to only 10% of non-smokers, the lack of knowledge of the risks associated with alcohol and drug use while being aware of the related induced relaxation, could set off experimentation or the use of these psychoactive substances.

From the study done in Ghana by Asiamah *et al*, (2002) the majority of drivers expressed the knowledge that drunk driving was a significant risk factor for crashes. It was also reported that about 50% of the participants knew that psychoactive substance use can lead to reckless driving etc.

A high level of knowledge was demonstrated in another study done in Ghana where, 66% of the long distance stated that the use of the substance had positive effect on them while only 22 % of respondents stated that the substance had negative impact on them (Samuel *et al*, 2016).

Kagashe and Seleman, (2009) reported in a study done in Dar'es Salaam, Tanzania, that about 50% of the drivers had poor knowledge on the harmful effect of psychoactive substance use while less than half of the drivers good knowledge on the use of these substances.

In a descriptive cross sectional study done in Lagos, Southwestern Nigeria by Oridota *et al*, (2013) among 358 commercial drivers reported that, majority of the respondents had good knowledge on the following harmful effect of psychoactive substance use; behavioural changes(78.8%), mental illness(65.1%), accident (64.8%) and death (59.8%) respectively.

Findings in another studies done in Lagos, Nigeria by Makanjuola *et al*, (2014) also revealed that respondents showed a relatively high level of knowledge concerning the harmful effect on the use of alcohol, tobacco, caffeine and cannabis.

Ajibade and Adefolaju (2017) revealed in a study done in Lokoja, Nigeria that majority (93.1%) of the respondents had good knowledge of psychoactive substances even before been commercial road transport workers.

Raute *et al*., (2011) reported that despite a fairly high level of knowledge of health effects from smokeless tobacco use in Maharashtra and Bihar, the majority of smokeless tobacco users had no intention to quit.

2.3 Types of Psychoactive Substance Use among Long Distance Drivers

Psychoactive substance or drug refers to all psychoactive substances which when taken by a living organism may modify perception, mood, cognition, behaviour or motor function. These include; alcohol, tobacco, solvents, marijuana or Indian hemp, caffeine (Kola), coffee, cannabis, cocaine, benzodiazepines, palm wine and 'paraga'(an alcoholic herbal mixture) (Umar *et al*, 2017).

Umar *et al,* (2017) reported that the most commonly use psychoactive substances in Kano State, Northwestern Nigeria among long distance commercial drivers include; solution (93.3%)

coffee (85.2%), Tramadol (80.6%), local stimulant tea (Gadagi) (78.1%), cola-nut (66.3%) and tobacco (65%).Adejugbagbe *et al*, (2015) in another study done in Ibadan, Southwestern Nigeria reported that the psychoactive substances most commonly used by the respondents in descending order were kola nut (38.5%) alcohol (34.0%) and cigarettes (26.0%).

Oridota *et al*, (2013) in a study done in Lagos also reported that the psychoactive substances mostly used among respondents were analgesics (76%), 105 (29.3%) used alcohol, 81 (22.6%) marijuana (cannabis) and 36 (10%) took stimulants.

Cigarette Smoking

Smoking-related deaths have been attributed to a range of diseases including cardiovascular disease, respiratory disease (including chronic obstructive pulmonary disorder) and lung cancer. Nineteen per cent of all deaths in the UK were estimated to be directly attributable to smoking in 2005. In 2009, an estimated 81,400 deaths among adults aged 35 and over were attributable to smoking, representing 18% of all deaths for that year (THSCIC, 2010).

Usman and Ipinmoye (2016) reported that 176(43.5%) of the drivers smoke a cigarette habitually while only 48(11.9%) smoke cigarette shortly before or during driving. 26(6.4%) of the drivers smoke cigarette on a daily basis.

Ajibade and Adefolaju, (2017) also revealed in a study done in Lokoja, North-central Nigeria among commercial drivers that the majority of the respondents (99%) smoke cigarette.

Kola nut

Kola nut (*Cola nitida*) is consumed for socio-cultural reasons in West Africa sub-region. The caffeine contents are alleged to be of benefit to many people of different occupations (Tijani and Adetutu, 2013). It is a central nervous system stimulant which has been shown to mediate some physiological effects that are similar to the action of caffeine (Carrillo and Bennitez, 2000). Kola nuts have been used in folk medicine as an aphrodisiac and an appetite suppressant, enabling African soldiers who chew them to travel long distances without food (Trindall, 1997).

Kola nut has a marked stimulating effect on the human consciousness; this effect may be used in alleviating nervous debility. It can also aid in alleviating depression and may in some people, give rise to euphoric states. Other uses include increasing the capacity for physical exertion and for enduring fatigue without food, stimulating a weak heart, despondency, brooding, anxiety and sea sickness (The Psychoactive Encyclopedia (T.P.E), 2008).

Adejugbagbe *et al*, (2015) reported that among the 592 long-distance motor vehicle drivers, the substances most commonly used by the respondents in descending order were kolanut (38.5%) alcohol (34.0%) and cigarettes (26.0%) respectively.

Similar study done in Ibadan, Southwest Nigeria by Tijani and Adetutu, (2013) among long distance drivers revealed that majority of the respondents 69% consumed Kola nut not only for cultural reason but also due to the perceived benefit to their job.

Local Stimulant Tea

Given the monotony and extended driving periods inherent in transport truck driving, drivers might rely on stimulants to sustain attention and combat fatigue. Research done by Gates *et al*,

(2013) indicated that stimulant use improves some cognitive functions but impairs driving ability and is linked to crashes.

In a case control study done by Sharwood *et al* (2013) in Australia, out of 1047 respondents, 43% drivers reported consuming tea containing substances such as coffee, caffeine or energy drinks for the express purpose of staying awake. Only 3% of the respondents reported using illegal stimulant such as amphetamine and cocaine. Drivers who consume caffeinated substance for the purpose of staying awake had 63% reduced likelihood of crashing (Odd ratio: 0.37, 95% CI=0.27-0.50) compared with drivers who did not take caffeinated substances.

Marijuana

Marijuana (cannabis or hemp) is one of the most widely used illegal drugs in Nigeria. It is also called "Igbo, Gbana, Kaya, Wee-wee and Abana"(Crumpton, 2015).

Chamberlain and Solomon, (2012) reported in a national survey of drivers done in Canada that the percentage of respondents who admitted to driving within two hours of using marijuana increased from 1.5% in 2002 to 2.4% in 2006.

In a study done in Ghana by Shaibu (2014) revealed that marijuana is the most prevalent illegal drug detected in impaired drivers, fatally injured drivers, and motor vehicle crash victims. Other drugs also implicated include benzodiazepines, cocaine, opiates, and amphetamines.

According to Usman and Ipinmoye (2016) in a study done in Akure, Southwestern Nigeria asserted that 35(8.6%) of the drivers use marijuana habitually while only 9(2.2%) use marijuana shortly before or during driving. The main reasons given for the use of marijuana include use for fun/refreshment/recreation, for body activeness, and occasionally for just social purposes.

Emiola, (1990) also reported that the three common drugs used among drivers were marijuana, alcohol and tobacco/cigarette.

Alcohol

WHO, (2004) reported that alcohol consumption is responsible for approximately 3.3 million deaths annually, and accounts for 5.1% of the global burden of disease. Harmful consumption of alcohol has been ranked among the top five risk factors for non-communicable disease, disability and death globally and has been causally linked to over 200 health conditions including cancer. In 1988, alcoholic beverages were classified as a class 1 carcinogen (IARC, 1988) and a large body of evidence now demonstrates the causal link between alcohol consumption and cancer. Alcohol consumption is therefore a topic of considerable public health concern internationally (WCRF and AICR, 2007).

Borlagdan *et al*, (2010) in a study done in Australia revealed that alcohol consumption is highly prevalent in Australia, supported by cultural norms which condone and often encourage use. In 2010, 1 in 5 Australians consumed alcohol at levels that put them at long-term risk of harm from alcohol-related disease or injury, and around 2 in 5 drank at levels that put them at short-term risk of alcohol-related injury. While the majority of Australians drink alcohol at low-risk levels, excessive consumption is associated with significant harms for both individuals and society (AIHW, 2010).

In Nigeria, high rates of alcohol and drugs use among commercial vehicle drivers and high death toll was reported by Chidoka, (2008).

A study done by Adekoya *et al*, (2011) on driving under influence of alcohol among long distance commercial drivers in Ilorin, Nigeria, revealed that alcohol consumption, cigarette smoking while driving, and eating kola nut while driving were 11.5%, 25.8%, and 48.4%, respectively.

Amphetamine

Amphetamine is the common name for 1-phenyl-2-aminopropane. The chemical has two forms: “dextro and levo”, of which the former is the most powerful central nervous system stimulant. For pharmaceutical purposes dextramphetamineand a racemic mixture, commonly termed amphetamine, are available (Laurence and Bennett, 1980).

Amphetamines, or ‘amphetamine-related drugs’, are stimulants prescribed for a variety of conditions (e.g. attention deficit hyperactivity disorder (ADHD) and the sleep disorder narcolepsy) with the temporary action of increasing the activity of the central nervous system, producing effects similar to adrenaline. Despite heavy media coverage regarding amphetamines and increased research attention in some countries, the harm reduction response remains underdeveloped when compared to the response to opiates and injecting-related harms (Hart *et al*, 2012).

Girotto *et al*, (2014) in a study done in Brazil revealed that most frequently used substances were amphetamines (82.5%), marijuana (29.9%), and cocaine (8.3%). In their report, the frequency of psychoactive substance use by truck drivers seems to be high, although that greatly varies according to the type of substances used.

2.4. Accessibility of the Psychoactive Substance to Long Distance Drivers

According to Oxford Advanced Learner's Dictionary (2014), accessibility is referred to as a process by which something can be reached, entered, used or physically seen i.e. able to be obtained, used, or experienced without difficulty. Commercial garages are motor parks located along the designated route of those drivers. It was pointed out that drivers use psychoactive substances when they stop-over, with alcohol being the most commonly used substance (Makanjuola *et al*., 2014).

Without access, there can be no use and associated problems. As a social rule, when a substance is inexpensive, convenient and easily accessible, usage is more likely to occur, which increases types and rates of associated problems. Conversely, when a substance is

expensive, inconvenient, and inaccessible, people are less likely to use it and problems types and rates are lowered. Smart, (1980) defined accessibility to as social aspects because drugs are more available to some social (e.g. work place) groups than others.

Essien and Ibiok (2016) recorded in their study done in Uyo, Nigeria that percentage of ease of access and proximity to the drugs under study with alcohol being the most accessible with 93.7%, cigarette 92%, and marijuana being the least accessible 41%.

2.5. Effects of Psychoactive Substances use among Long Distance Drivers

Psychoactive substance use can be harmful and its effects can be both immediate to health or long term. Injuries such as bruises, lacerations and fractures of upper and lower limbs can have immediate effects on health. It also affects cognitive development and short-term memory and also has long-term effects like nausea, insomnia, and loss of weight, convulsions and depression.

Psychoactive substances have been reported with the ability to change consciousness, mood, and thoughts. A significant proportion of commercial drivers use stimulants to keep awake and relieve fatigue during their long work schedules (Davey and Richards, (2005).

People use psychoactive substances because they expect to benefit from their use, whether by pleasure or by the avoidance of pain, including social uses. But using psychoactive substances also carries with it the potential for harm, whether in the short run or in the longer term. The main harmful effects due to substances used can be divided into four categories (Fareo, 2012):

Firstly, there was chronic health effects e.g. liver cirrhosis, lung cancer, emphysema etc(WHO, 2004).Through the sharing of needles, heroin use by injection is a main vector for transmission of infectious agents such as HIV and hepatitis B and C virus in many countries.

Secondly, there are acute or short-term biological health effects of the substance. Notably, for drugs such as opioids and alcohol, these include overdose (Subata, 2002).There is a general

agreement that substance use often accompanies interpersonal violence. However, beyond that point, there is little agreement that substance use can (or cannot) be thought of as a cause of violent crime. For some, the fact that drinking and drug use is a cause of violence is self-evident (Darryl, 2009).

Also classed in this category are the casualties due to the substance's effects on physical coordination, concentration and judgment, in circumstances where these qualities are demanded. Casualties resulting from driving after drinking alcohol or after other drug use feature prominently in this category, but other accidents, suicide and (at least for alcohol) assaults are also included.

The third and fourth categories of harmful effects comprise the adverse social consequences of the substance used: acute social problems, such as a sudden break in a relationship or an arrest, and chronic social problems, such as defaults in working life or in family roles (WHO, 2004).

Adekoya *et al,* (2011) also reported in a study done in Ilorin, North-central Nigeria that the major reasons given for the use of psychoactive substances among respondents were majorly to keep alert, and sometimes for social reasons.

The amount of harm associated with the use of these substances is increasing in Nigeria and other middle and low income countries in sub-saharan Africa as well as high income countries like the United State etc. (Aliyu, 2014).

In general, studies of the alerting effects of small acute doses of amphetamine have shown smaller effects for interested, motivated, fresh subjects than for fatigued subjects (Kornetsky,1969). However, amphetamine as a psychoactive substance reduces the frequency of attention lapses that impair performance after prolonged sleep deprivation, and thus improves execution of tasks requiring sustained attention.

In a study done in Ekiti State by Awosusi and Joseph, (2013) reported that the leading health effects of substance use were liver damage (93.3%); disease of the lungs (93.3%) and headache (91.2%) for physical health effects. Similarly, more than 75% of the respondents recognized the psychological and social health consequences of substances used.

2.6. Determinants of Psychoactive Substances Use by Long Distance Drivers

In Lagos State Nigeria, Psychosocial factors such as level of religiosity, age, level of education, income of drivers, driving experience, number of children, presence of sex partner, perceived level of physical wellness, perceived level of emotional wellness, having had previous road traffic accident, and having heard of antidrug abuse campaign have been seen as contributory factors to the use of psychoactive substance among long distance vehicle drivers (Makanjuola *et al*., 2014).

Haladu (2003) in his findings gave the following as the factors that causes the use of psychoactive substances.

i. **Experimental Curiosity:** Curiosity to experiment the unknown facts about drugs thus motivates adolescents into drug use. The first experience in drug abuse produces a state of arousal such as happiness and pleasure which in turn motivate them to continue.

ii. **Peer Group Influence:** Peer pressure plays a major role in influencing many adolescents into drug abuse. This is because peer pressure is a fact of teenage and youth life. As they try to depend less on parents, they show more dependency on their friends. In Nigeria, as in other parts of the world, one may not enjoy the company of others unless he conforms to their norms.

iii. **Lack of parental supervision:** Many parents have no time to supervise their sons and daughters. Some parents have little or no interaction with family members, while others put pressure on their children to pass exams or perform better in their studies. These phenomena initialize and increases drug abuse.

iv. **Personality Problems due to socio-economic conditions:** Adolescents with personality problems arising from social conditions have been found to abuse drugs. The social and economic status of most Nigerians is below average. Poverty is widespread, broken homes and unemployment is on the increase, therefore our youths roam the streets looking for employment or resort to begging. These situations have been aggravated by lack of skills, opportunities for training and re-training and lack of committed action to promote job creation by private and community entrepreneurs. Frustration arising from these problems lead to recourse in drug abuse for temporarily removing the tension and problems arising from it.

v. **The Need for Energy to Work for Long Hours:** The increasing economic deterioration that leads to poverty and disempowerment of the people has driven many parents to send their children out in search of a means of earning something for contribution to family income. These children engage in hawking, bus conducting, head loading, scavenging, serving in food canteens etc and are prone to drug taking so as to gain more energy to work for long hours.

vi. **Availability of the Drugs:** In many countries, drugs have dropped in prices as supplies have increased.

vii. **The Need to prevent the Occurrence of Withdrawal symptoms:** If a drug is stopped, the user experiences what is termed “withdrawal symptoms”. Pain, anxiety, excessive sweating and shaking characterize such symptoms. The inability of the drug user to tolerate the symptoms motivates him to continue (Kelly *et al*, 2004).

A study done among 274 long-distance commercial drivers in Nigeria by Okpataku (2015), younger drivers were reported to be more likely to use cannabis ($p<0.0001$) and tobacco ($p<0.028$), while those who had no spouse used more cannabis. A significant proportion of alcohol users were Christians with formal education, while Muslims were more likely to use cannabis and caffeinated substances. Significant predictors of alcohol use were being a Christian,(OR = 30.6, P < 0.0001) and above 45 years of age,(OR = 3.3, P = 0.007), while significant predictors of cannabis use were not having a spouse, (OR = 6.6, P = 0.004), and below 45 years of age,(OR = 5.5, P = 0.03).

Findings from Umar *et al*, 2017 showed that eight out of every ten (81.1%) of commercial drivers had ever used a substance. The desires to relax/sleep after a hard days job (84.8%), work hard (48%), relieve stress (81%), relieve anxiety (66.5%) and pleasure (72%) were major factors associated with the use of psychoactive substances by the respondents.

Movig *et al*, (2004) indicated that the use of alcohol, amphetamines, benzodiazepines, cocaine, and opiates places drivers at increased risk for motor vehicle accidents requiring hospitalization. Users of drug to drug combinations were at a six-fold increased risk (adjusted OR 6.1 (95% CI=2.6–14.1). Vehicle drivers who were exposed to drug–alcohol combinations were at the highest risk of experiencing injurious road accidents.

The main reasons given for the smoking of cigarette include use for refreshment/recreation, keeping their body system at alert and occasionally for just social purposes as reported by Usman and Ipinmoye (2016) in a study done in Akure, Southwestern Nigeria.

Ozoh *et al*, (2017) also reported in a study done in Lagos, Southwestern Nigeria that having close friends that smoked (OR= 6.36, 95% CI= 2.49 - 16.20), cargo driving (OR= 2.58, 95% CI=1.29-5.15), and lower education levels (0.17, 95% CI= 0.04 - 0.81) were significantly associated with cigarette smoking among long distance drivers.

In another study done in Calabar by Okafor *et al,* (2016), it was reported that the determinants of alcohol use were history of use by parents (OR-2.7, CI=1.1-6.3)**,**Friends(OR =3.2,CI=1.3-7.8) and availabilit**y** (OR=4.1, CI=1.9-8.8).

According to Maduako and Aguwa (2002) the two main determining factors in the use and misuse of psychoactive substance such as alcohol and other CNS depressants are the dosage consumed and the duration of intake. Very large dosage may cause intoxication of the agent used e.g. for suicide purpose.

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1. Study Area

The Sokoto State Ministry of Religious Affairs recorded that, the seat of caliphate referred to as Sokoto is located on the longitude 05^0 11^1 and 13^0 03^1 East, latitude $13^0 00^1$ North and covers area of 60, 33km^2(SSMRA, 2011).The town is mostly populated by the indigenous Hausa-Fulanis. It is located in the northwest part of the country, with a population of 2,443,596 females and 2,411,145 males with a total number of 4,854,741 in 2015 while as at November, 2016 the population has increased to 2,518,266 males and 2,484,824 females making a total of 5,003,090 people (NPC, 2016).

This study specifically considered the long distance vehicle parks such as Central motor park, Aliyu motor Park, Round mairuwa Park, Dogon-daji House motor Park and Bafarawa Flyover Park in Sokoto metropolis, to obtain valuable information from respondents.

A central park is located close to the Sokoto central market in the centre of Sokoto city bordered to the west by Hajia Halima estate, to the north by central market, to the east by Unity bank and to the south by other supermarket stores. It is the major park in Sokoto state which covers different destination of passengers' such as the 36 states in Nigeria, including FCT Abuja and near-by motorable African countries (Niger Republic and Togo Republic etc). Located in this park are several types of shops selling variety of things such as cigarettes, herbal concoction drugs etc), foods and drinks, clothes and bags, recharge cards, phones and accessories, kitchen utensils etc..

Aliyu Park bordered by NTA Sokoto to the north, Noma Hospital to the east and to the south by Dandima area. The major destinations of this park are Kano, Bauchi, Gombe, Jigawa etc. The single shop located in this park sells soft drinks and pure water only. No evidence of sales of psychoactive substance in this park.

Round Mairuwa Park is bordered to the north by FGC, to the south by centre point plaza and to the west by Gusau road. The drivers located in this park usually ply Kano, Kaduna, Abuja, Kogi etc. Most of the shops available there sell soft drinks, foods and psychoactive substances such as cigarettes, drugs, herbal concoction etc.

Dongo-Daji House motor Park is located along Maiduguri road in Sokoto metropolis. It is bordered by Central Bank of Nigeria to east, J-Allen road to the west, Access Bank Plc to the south and Mr. Biggs Restaurant to north. This park usually plies through Kebbi state, Kontagora, Minna and other Local governments in Sokoto State. The shops in this park usually sell drinks and food only.

Bafarawa Flyover Park is bordered by Bafarawa flyover to the north, Airport road to the south and to the west by road leading to Sokoto Polytechnic. The major destination of this park also comprises of Yawuri, Minna etc. Shops located here usually sell fast foods, recharge cards, soft drinks; the only psychoactive substance available in these shops is cigarettes.

3.2.Study Population

This study population consisted of commercial long distance drivers at the inter-states motor parks in Sokoto metropolis.

3.2.1 Inclusion criteria

The drivers plying through long distance of 300km and above utilizing one of the five parks were enrolled in this study.

3.2.2 Exclusion criteria

The long distance drivers who are non-commercial drivers present at the park were not considered eligible for the study.

3.3. Study Design

The study design was cross-sectional and descriptive.

3.4. Sample size determination

This was estimated using the formula for sample size estimation for cross sectional studies. The statistical formula below was employed (Ibrahim, 2009).

Sample Size $n = \frac{Z^2pq}{d^2}$

Where:

n= the minimum sample size

z= the standard normal deviate, usually set at 95% confidence level which is = 1.96.

p= the proportion of psychoactive use among commercial long distance drivers estimated from the previous study 48.4% = 0.484 (Adekoya *et al*., 2011)

q= 1.0-p

d= degree of accuracy desired set at 0.05 (using 95% confidence interval)

To determine the sample size when studying proportion, with population <10,000, the above formula is employed.

Therefore,

$$n = \frac{(1.96)^2 \times 0.484 \times 0.516}{(0.05)^2}$$

$$= \frac{0.960}{0.0025} = 384.0$$

Since the study population size was less than 10,000, the final sample size ($\mathbf{n}_f$) was obtained using the below formula for calculating sample size in cross-sectional studies.

$$\mathbf{n}_f = \frac{n}{1 + \frac{n}{N}}$$

Where $\mathbf{n}_f$= final sample size

n = the desired sample size when the population is less than 10,000 = 384

N= estimate of study population = 800(NURTW Register)

1 = constant

The population size was estimated at 800, and then $\mathbf{n}_f$ was calculated as follows:

$$\text{Therefore, } \mathbf{n}_f = \frac{384}{1 + \frac{384}{800}}$$

$$= \frac{384}{1.48} = 259.45 \ \Omega \quad N_f = 260$$

Allowing for 90% response rate = 0.9, the minimum sample size to be selected (n_s) was:

$$n_s = \frac{n_f}{0.9}$$

$$= \frac{260}{0.9} = 288.88\ \Omega \quad n_s = 289$$

The final estimated sample size was 289.

3.5. Sampling Technique

A multistage sampling technique was used to select the respondents.

Stage 1:

Five motor parks were randomly selected from the eight motor parks within Sokoto metropolis using simple ballot random sampling.

Stage 2:

The average numbers of long distance drivers in each of the five selected motor parks were as follows;

1. Central Park = 250
2. Aliyu Park = 120
3. Round Mairuwa Park = 200
4. Dongo-daji Park = 110
5. Bafarawa flyover Park = 120 (NURTW Register)

The number of long distance drivers selected from each park was done proportionate to size using the formula $n_1 = n/N \times S$ (Ibrahim, 2009),

Where n_1= the numbers of LDD to be selected in the park, n=population of LDD in the park, N=Total population of LDD and S=sample size.

Therefore, for each of the above study sites, the number of long distance drivers that were recruited was as follows;

1. Central Park = 250/800x289=90
2. Aliyu Park = 120/800x289=43
3. Round Mairuwa Park = 200/800x289=73
4. Dongo-daji Park =110/800x289=40

5. Bafarawa flyover Park = 120/800x289=43

For each of the motor parks systematic sampling was used to select the respondents.

The sampling interval was estimated for each of the five parks using the formula. K=N/n (Ibrahim, 2009)

Where K=sampling interval N=total numbers of LDD in the park, and n=proportionate allocation to the park.

The average sampling interval for all was approximately 3.

The first driver was selected by simple random sampling (balloting) out of the first three on the list on the interview day at each of the five designated motor parks, then each consecutive 3rd driver was interviewed until the sampling fraction for that park was attained. This process was repeated at the various motor parks until the sample size was attained.

3.6. Data Collection

3.6.1. Method of data collection

Quantitative method of data collection was used. A pre-tested, semi structured interviewer administered questionnaire was used. The questions of the questionnaire were partially adapted from instruments used in previous studies (Makanjuola *et al*., 2007; Awosusi and Joseph, 2013). Prior to the administration of the questionnaire, a verbal consent was obtained from the study subjects. For the fieldwork, an English version of the questionnaire which was developed initially was translated into Hausa language and back translated to English by a Hausa scholar for Hausa speaking respondents.

3.6.2. Instruments of data collection

For the purpose of this study, 289 questionnaires with 31 items each was administered to the targeted respondents. The questionnaire was developed after extensive review of the literatures(Okpataku, 2014,Makanjuola *et al*., 2014 Labat *et al.,* 2008) and was arranged by the researcher into five sections. Section (A) contains information on the socio-demographic characteristics, Section (B) assessed the knowledge of the respondents on harmful effects of

psychoactive substances, Section (C) requested information on the various types of psychoactive substance used by the respondents, Section (D) focused on the accessibility of psychoactive substance to respondents; Section (E) sought information on the effect of psychoactive substance used among respondents.

The questionnaire is attached as appendix 1.

3.7.Personnel and Pre-testing

Four 500level medical students from Usmanu Danfodiyo University Teaching Hospital were recruited to assist in the administration of the questionnaire. They were trained for three days by the researcher on the general principles and conduct of the research, the objectives of the study, use of survey instruments and various aspects of the study.

The research instrument was pretested in Shunih Local Government (an area not in study site). Questionnaires were administered among 20 randomly selected drivers in Shunih Motor Park. The purpose of pretesting study was to check for appropriateness, to acquit the research assistants on the research instrument, to test validity and reliability of the questionnaire, to identify items in the questionnaire that may be ambiguous and also identify logistic issues that might constitute serious challenges to the main study.

3.8. Data Management

The data cleaning was done and was individually coded into the computer, processing and analysis was also done using the IBM Statistical Package for Social Sciences (SPSS) software version 20. Data was presented using tables and graphs. Categorical data were summarized using frequencies and percentages. Quantitative data was summarized using standard deviation. Chi-square test was used to compare proportions. Regression analysis was used to determine the factors that predict the use of psychoactive substance among long distance drivers. The level of statistical significance was set at $p<0.05$.

3.8.1. Indicators for the assessment of research variables

- Proportion of respondents by their socio-demographic characteristics
- Frequency of various types of psychoactive substance use by long distance drivers.
- Frequency and percentage of accessibility of the psychoactive substances to the Long distance drivers
- Percentage distribution of determinants for the use of psychoactive substances among long distance drivers.
- The Percentage and frequency of effect of the psychoactive substances used among long distance drivers
- Proportion of respondents with good knowledge of harmful effect of psychoactive substance use.
- Proportion of respondents who smokes cigarette among long distance drivers,
- Proportion of respondents who consumes kola nut among long distance drivers
- Proportion of respondents who consumes local stimulant tea among long distance drivers.
- Proportion of respondents who smokes marijuana among long distance drivers.
- Proportion of respondents who consumes alcohol among long distance drivers.

3.9. Ethical Consideration

Ethical clearance was obtained from the ethics committee of the Ministry of Health Sokoto State and permission to conduct the study was obtained from the National Union of Road Transportation Workers (NURTW). In addition, informed consents of the respondents were obtained before the interview.

3.10. Duration of study

Data collection and analysis was between June, 2017 to Nov, 2017.

3.11. Limitations of the study

The limitations encountered in this study were;

- Influence of religion i.e. many of the respondents were Muslims by religion and they saw this study as unethical or not religiously inclined because the religion does not allow such exposure to hard drinks e.g. alcohol.
- Non-response and deliberate misinformation by the respondents. Adequate information was given to the study subjects on the objectives of the study in addition to assuring them of the confidentiality of the information given by them, to overcome these limitations.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-Demographic Characteristics of the Respondents

Table1:Distribution of Socio-demographic characteristics of the respondent.

Age group(Years)	Frequency	Percentage (%)
<30	34	12.1
30-44	150	53.6
45 and above.	96	34.3
Sex		
Male	280	100.0
Religion		
Christianity	15	5.4
Islam	265	94.6
Marital status		
Single	19	6.8
Married	253	90.4
Divorced	4	1.4
Married but living apart	4	1.4
Have another sexual partners		
No	173	61.8
Yes	101	36.1
Sexual partners		
<2SP	24	8.6
2 and above SP	81	28.9
Educational status		
None	7	2.5
Quran only	78	27.9
Primary	83	29.6
Secondary	87	31.1
Tertiary	23	8.2
Income in categories		
<₦18,000	17	6.1
₦18,000 and above	263	93.9
Own the vehicle you drive		
No	139	49.6
Yes	141	50.4

All the respondents were males, mean age was 40.1± 10.1years. Majorities (94.6%) were Muslims, married (90.4%), 93.9% earn more than N18000 and about half of them own the vehicle.

4.2 Knowledge of Respondents on Harmful Effect of Psychoactive Substance

Table 2: Knowledge of respondents on harmful effect of Alcohol, Marijuana, Codeine and Cigarette

Knowledge	Good Response	Poor Response

	n (%)	n (%)
Harmful effect occurs when psychoactive substance causes damage to health	247(88.2)	32(11.4)
Psychoactive substance use affect health negatively	203(72.5)	76(27.1)
Use of alcohol causes liver damage	109(38.0)	98(35.0)
Use of alcohol causes alteration in family relationship	79(28.2)	128(45.7)
Use of alcohol causes high blood pressure	80(28.6)	127(45.4)
Use of alcohol causes accident	98(35.0)	109(38.9)
Use of alcohol causes brain damage	94(33.6)	113(40.4)
Smoking of marijuana causes	53(18.9)	154(33.0)
Smoking of marijuana causes hand tremor	20(7.1)	187(66.8)
Smoking of marijuana increases aggressiveness	114(40.7)	92(32.9)
Smoking of marijuana causes mental illness	161(57.5)	46(16.4)
Smoking of marijuana causes heart disease	74(26.4)	133(47.5)
Use of codeine causes emotional problem	75(6.8)	132(47.1)
Use of codeine may lead to arrest by law enforcement agents	149(53.2)	58(20.7)
Use of codeine causes restlessness/nervousness	42(15.0)	165(58.9)
Use of codeine may lead one in to robbery	56(20.0)	151(33.9)
Use of codeine causes mental illness	112(40.0)	95(33.9)
Cigarette smoking causes lungs disease	127(45.4)	80(28.6)
Cigarette smoking causes hypertension	81(28.9)	126(45.0)
Cigarette smoking cause premature death	150(53.6)	57(20.4)
Cigarette smoking causes heart disease	97(14.6)	110(39.3)
Cigarette smoking causes oral cancer	28(10.0)	179(63.9)

♦**Multiple response analysis**

The majority, 247(88.2%) of the respondents knew that harmful effects occur when psychoactive substance cause damage to the health. 114(40.7%) of respondents knew smoking marijuana can increase aggressiveness while 98 (35.0%) Accident was known as effect of alcohol.

High percentage of respondents knew that the use of codeine can lead to arrest by law enforcement agents 149 (53.2%) and 112(40%) of respondents knew codeine use could result to mental illness.

Table 3: Knowledge of respondents on harmful effect of Amphetamine, Cocaine, trammadol Local stimulant tea and Kola nut

Knowledge	**Good Response n(%)**	**Poor Response n(%)**
Use of amphetamine causes headache	82(9.5)	125(44.6)
Use of amphetamine causes hand tremor	63(22.5)	143(51.1)
Use of amphetamine causes emotional problem	50(17.9)	157(56.1)
Use of amphetamine causes restlessness	12(4.3)	195(69.6)
Use of amphetamine causes mental illness	104(37.1)	103(36.8)
Use of cocaine causes drug abuse	169(60.4)	38(13.6)
Use of cocaine causes restlessness	26(9.3)	181(64.6)
Use of cocaine causes mental illness	157(56.1)	50(17.9)
Use of cocaine can lead to robbery	22(7.9)	185(66.1)
Use of cocaine causes depression	58(20.7)	149(53.2)
Use of Trammadol causes drug abuse	152(54.3)	54(19.3)
Use of Trammadol causes mental illness	115(41.1)	92(32.9)
Use of Trammadol causes kidney damage	50(17.9)	157(56.1)
Use of Trammadol causes sleeplessness	80(28.6)	127(45.4)
Use of Trammadol causes liver damage	45(16.1)	162(57.9)
Drinking of local stimulant tea causes headache	74(26.4)	133(47.5)
Drinking of local stimulant tea causes restlessness	37(13.2)	170(60.7)
Drinking of local stimulant tea causes emotional problem	36(12.9)	171(61.1)
Drinking of local stimulant tea causes mental illness	132(47.1)	74(26.4)
Drinking of local stimulant tea causes hand tremor	48(17.1)	159(56.8)
Consumption of kola nut causes sleeplessness	156(55.7)	51(18.2)
Consumption of kola nut causes oral cancer	35(12.5)	172(61.4)
Consumption of kola nut cause hypertension	107(38.2)	100(35.2)
Consumption of kola nut causes restlessness	22(7.9)	185(68.1)
Consumption of kola nut causes emotional problem	71(25.4)	136(48.6)

♦**Multiple response analysis**

The majority of the respondents 169 (60.4%) knew that the use of cocaine can leads to drug abuse 151 (54.3%), The most commonly known harmful effect of amphetamine use was mental illness 104 (37.1%).Inability to sleep, 156 (55.7%) was the highest knowledge the respondents have on the harmful effect that use of kola nut can result to,107 (38.2%) respondents knew it can lead to high blood pressure while restlessness or nervousness was shown to be the least knowledge the respondents had 22 (7.9%).

Table 4: Knowledge level of respondents on harmful effect of psychoactive substance

Knowledge Level	Frequency	Percentage (%)
Poor	130	46.4
Fair	142	50.7
Good	8	2.9
Total	280	100

♦**Multiple response analysis**

The majority of the respondents 142(50.7%) had fair knowledge on the harmful effect of psychoactive substance while only few respondents 8(2.9%) have a good knowledge.

4.3: Types of Psychoactive Substances in use Among Long Distance Drivers in Sokoto

Table 5: Distribution of types of psychoactive substances in use by Long Distance Drivers in Sokoto

Psychoactive substance use in the past 2 weeks	Frequency	Percentage (%)
Alcohol		
Yes	30	10.7
No	250	89.3
Marijuana		
Yes	45	16.1
No	235	83.9
Codeine		
Yes	13	4.6
No	267	95.4
Cigarette		
Yes	134	47.9
No	146	52.1
Amphetamine		
Yes	4	1.4
No	276	98.6
Cocaine		
Yes	1	0.4
No	279	99.6
Trammadol		
Yes	18	6.4
No	261	93.2
Local stimulant tea (gadagi)		
Yes	76	27.1
No	204	72.9
Kola-nut		
Yes	117	41.8
No	163	58.2
Others		
Nescafe		
Yes	13	4.6
No	267	95.4
Daga		
Yes	4	1.4
No	276	98.6

Majority of the respondents, 134 (47.9) smoked Cigarette, 117(41.8%) respondents consumed kola-nut, 76 (27.1%) drink local stimulant tea, forty-five (16.1%) smoked marijuana, while 30 (10.7%) drink alcohol.

4.4: Accessibility of the Psychoactive Substances to the Respondents

Table 6:Ways of accessing psychoactive substances by the respondents

Source	Frequency	Percentage (%)
Access psychoactive substance use from friends		
Yes	142	50.7
No	74	26.4
Access psychoactive substance use from street vendors		
Yes	148	52.9
No	67	23.9
Access psychoactive substance use from motor park		
Yes	47	16.8
No	167	60.4
Access psychoactive substance use from store or shop		
Yes	103	36.8
No	113	40.4
Access psychoactive substance use from mammy market		
Yes	23	8.2
No	193	68.9
Access psychoactive substance use from other source e.g. from Lagos		
Yes	8	2.9
No	208	74.3

♦**Multiple response analysis**

Table 6: Ways of accessing psychoactive substances by the respondents' continuation

Variables	Frequency	Percentage (%)
I buy it		

Yes	196	70
No	18	6.4
As souvenir		
Yes	22	7.9
No	192	68.6
Through errand		
Yes	79	28.2
No	135	48.2
Through supplier		
Yes	39	13.9
No	175	62.5
Links from friend		
Yes	15	5.4
No	199	71.1
Others e.g. club houses		
Yes	4	1.4
No	210	75.0

♦**Multiple response analysis**

A high percentage of the respondents, 196 (70.0%) reported they bought their psychoactive substance, 79 (28.2%) of them through errand while 22 (7.9%) respondents got it as souvenir. More than half of the respondents, 148 (52.9%) access the psychoactive substance from Street vendor, 142 (50.7%) access theirs from friends, while the lowest was 47 (16.8%) who got from motor park.

4.5: Effect of the Psychoactive Substances used Among Respondents

Table 7: Distribution of effect of the psychoactive substances used among respondents

Effects	**Frequency**	**Percentage (%)**
Psychoactive substanceuse enhance driving ability	135	48.2
Psychoactive substanceuse prevent sleeping while driving	164	58.6
Psychoactive substanceuse gives personal pleasure	74	26.4
Psychoactive substanceuse makes one to feel belong	53	18.9
Psychoactive substanceuse helps to get relief from tension	71	25.4
Psychoactive substanceuse increase pleasure during sex	34	12.1
Psychoactive substanceuse makes one to have an accident	4	1.4

The majority, 164 (58.6%) respondents reported that psychoactive substance prevent sleeping while driving, 135 (48.2%) said it enhances driving ability.

4.6: Determinants of Psychoactive Substances use Among Long Distance Drivers.

Table 8: Correlates of Cigarette smoking among the respondents

Variables	Smoke Cigarette		Test statistics
	Yes	No	
	n(%) n=134	n(%) n=146	
Age group (in years)			
<30	19(14.1)	15(10.3)	$\chi 2 = 1.566$
30-44	73(54.5)	77(52.7)	P = 0.457
45 and above	42(31.4)	54(37.0)	
Religion			
Christianity	1(0.8)	14(10.0)	$\chi 2 = 10.776$
Islam	133(99.2)	132(90.0)	P = **0.001**
Have another sexual partner			
No	75(56.0)	98(67.12)	$\chi 2 = 3.153$
Yes	55(40.0)	46(31.50)	P = 0.076
Sexual partners in categories			
<2 SP	8(6.0)	16(10.95)	$\chi 2 = 5.00$
2SP and above	48(36.0)	33(23.0)	P = **0.025**
Own the vehicle you drive			
No	64(48.0)	75(51.0)	$\chi 2 = 0.364$
Yes	70(52.0)	71(49.0)	P = 0.546
Harmful effect occur			
No	13(10.0)	19(13.0)	$\chi 2 = 0.794$
Yes	121(90.0)	126(86.30)	P = 0.373
Can substance use affect health negatively?			

No	19(14.17)	57(39.04)	$\chi 2 = 22.192$
Yes	115(8.2)	88(60.27)	P = **0.00**
Knowledge of harmful effect			
of Psychoactive substance			
Poor	61(45.5)	69(47.3)	$\chi 2 = 0.507$
Fair	70(52.2)	72(49.3)	p = 0.776
Good	3(2.2)	5(3.4)	

Majority of those who smoke cigarette were between 30-44years, there was no association between cigarette smoking and age ($\chi 2 = 1.566$,p = 0.457). Large proportion of those who smoke cigarette were Muslims, There was association between cigarette smoking and religion of respondents ($\chi 2$=10.776**,** p = 0.001).More than half of those who smoke cigarette have no other sexual partners, there was no statistically significant association between smoking of cigarette and having another sexual partners($\chi 2$=3.153, p = 0.076). Most respondents demonstrated fair knowledge level on harmful effect of kola nut use and there is no statistically significant association between knowledge and cigarette smoking ($\chi 2 = 0.507$, p = 0.776).

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Table 9: Binary logistic regression for determinants of cigarette smoking

			95%Confidence interval	
Variables	**P-value**	**Odd ratio**	**Lower**	**Upper**
Religion	0.999	1596606014	1.829	108.810
Christianity/Islam				
Sexual partners	0.231	1.905	1.117	7.578
<2SP/above 2SP				
Can substance use affect health negatively	**0.006**	4.459	1.133	5.485
No/Yes				

Respondents who believed that cigarette smoking has no negative effect on the body were 4timesmore likely to smoke cigarette than those who believed it has negative effect on the body (OR = 4.459, P =0.006,CI= 1.133 - 5.485).

Table 10: Correlates of kola nut consumption among the respondent.

Variables	Consume kola nut Yes (%)	No (%)	Test statistics
	n(%) n=117	**n(%) n=163**	
Age group (in years)			
<30	6(5.12)	28(17.17)	$\chi2 = 20.56$
30-44	55(47.00)	95(58.28)	P = **0.00**
4 and above	56(47.86)	40(24.53)	
Religion			
Christianity	3(2.56)	12(7.36)	$\chi2=3.093$
Islam	114(97.43)	151(92.63)	P = 0.079
Have another sexual partner			
No	69(58.97)	104(63.8)	$\chi2=0.356$
Yes	44(37.60)	57(34.96)	P = 0.55
Sexual partners in categories			
<2SP	7(5.98)	15(9.20)	$\chi2=0.664$
2 and above SP	38(32.47)	43(26.38)	P = 0.415
Own the vehicle you drive			
No	46(39.31)	93(57.05)	$\chi2=8.573$
Yes	38(32.47)	70(42.94)	P **= 0.03**
Can substance use affect health negatively			
No	23(19.65)	53(32.51)	$\chi2=5.844$
Yes	94(80.34)	109(66.87)	P **= 0.016**
Knowledge of harmful effect of Psychoactive substance			
Poor	51(43.6)	79(48.5)	$\chi2 = 0.798$
Fair	63(53.8)	79(48.5)	p = 0.671
Good	3(2.6)	5(3.1)	

Majority of the respondents who consume kola nut were aged >30 years. Large proportion of those respondents who consume kola nut practice Islam, there is no association between consumption of kola nut and religion of respondents ($\chi2$ =3.093, P = 0.079).There was statistically significant association between the consumption of kola nut and owing the vehicle($\chi2 = 8.573$,p = 0.030).Eighty percent of the respondents who consume kola nut knew that substance use affect health negatively, there was significant between the respondent knowledge on harmful effects of substance use and kola nut use ($\chi2=5.844$, p = 0.016)**.**Most respondents demonstrated fair knowledge level on harmful effect of kola nut use and there is

no statistically significant association between knowledge level and kola nut consumption ($\chi 2 = 0.798$ $p = 0.671$).

Table 11: Binary logistic regression for determinants of Kola nut consumption

			95%Convidence interval	
Variables	**P-value**	**Odd ratio**	**Lower**	**Upper**
Age	**0.00**	2.199	1.436	3.369
<44/>45years				
Own a vehicle	0.218	1.391	0.823	2.352
No/Yes				
Can substance use affect	0.113	1.612	0.94	2.906
health negatively				
No/Yes				

The age of the respondents is a significant predictor of kola nut use (OR = 4.459, p = 0.006, CI= 1.133 - 3.485).

Table 12: Correlates of Consumption of local stimulant tea among the respondents

Variables	Consume local stimulant tea Yes n(%) n=76	No n(%) n=204	Test statistics
Age group (in years)			
<30	7(9.21)	27(13,23)	$\chi2 = 2.274$
30-44	38(50.00)	114(55.88)	P = 0.321
44 and above	31(40.78)	65(31.86)	
Religion			
Christianity	1(1.31)	14(6.86)	$\chi2=3.360$
Islam	75(98.68)	190(93.13)	P = 0.067
Have another sexual partner			
No	39(51.31)	135(66.17)	$\chi2=6.052$
Yes	36(47.36)	65(31.86)	P = **0.014**
Sexual partners in categories			
<2SP	5(6.57)	19(9.31)	$\chi2=2.499$
2 and above SP	31(40.78)	50(24.50)	P = 0.114
Own the vehicle you drive			
No	32(42.10)	107(52.45)	$\chi2=2.371$
Yes	44(57.89)	97(47.54)	P = 0.124
Can substance use affect health negatively			
No	7(9.21)	69(33.82)	$\chi2=17.131$
Yes	69(90.78)	34(16.66)	P **= 0.00**
Knowledge of harmful effectof Psychoactive substance			
Poor	37(48.7)	93(45.6)	$\chi2 = 0.218$
Fair	37(48.7)	105(51.5)	p = 0.897
Good	2(2.6)	6(2.9)	

Many of the respondents involved in drinking of local stimulants tea have another sexual partner. There was association between drinking of local stimulants and having another sexual partners ($\chi2=6.052$, p =0.014).

Significant proportion of respondents who consume local stimulant tea knew substance use affect health negatively. There was statistically significant association between the respondent knowledge on harmful effects of substance use and local stimulant tea use ($\chi2=17.131$, p=0.00).

Table 13: Binary logistic regression for determinants of Local Stimulant Tea consumption

			95%Confidence interval	
Variables	**P-value**	**Odd ratio**	**Lower**	**Upper**
Have another sexual partner No/Yes	0.029	1.875	1.068	3.291
Can substance use affect health negatively No/Yes	0.00	5.615	2.308	13.658

Respondents who has no sexual partners were almost 2 times more likely to use local stimulants compared to those that have sexual partners.(OR = 1.875, 95% CI=1.068 - 3.291, p = 0.029).Similarly,respondents who have knowledg on negative effects of substance use were also 2 times more likely to use local stimulant tea compared to those who has knoledge on negative effects of substance use.(OR = 5.615, 95% CI=2.308 – 13.658, p= 0.00).

Table 14: Correlate of Smoking of Marijuana among the respondents

Variables	Smoke Marijuana		Test statistics
	Yes	No	
	n(%) n=45	n(%) n=235	
Age group (in years)			
<30	13(28.88)	21(8.93)	$\chi 2$ = 21.195
30-44	27(60.00)	123(52.34)	P = **0.00**
44 and above	5(11.11)	91(38.72)	
Religion			
Christianity	0(0.00)	15(6.38.)	$\chi 2$=3.035
Islam	45(100.0)	220(93.61)	P = 0.081
Have another sexual partner			
No	28(62.22)	145(61.7)	$\chi 2$=0.86
Yes	15(33.33)	86(36.6)	P = 0.776
Sexual partners in categories			
<2SP	4(8.88)	20(8.51)	$\chi 2$=0.49
2 and above SP	12(26.66)	69(29.36)	P = 0.825
Do you have a driving license			
No	9(20.0)	15(6.38)	$\chi 2$=8.936
Yes	36(80.0)	220(93.6)	P = 0.003
Can substance use affect health negatively			
No	7(15,56)	69(29.36)	$\chi 2$=17.131
Yes	38(84.44)	34(14.46)	P = **0.00**
Knowledge of harmful effect of Psychoactive substance			
Poor	13(28.9)	117(49.8)	$\chi 2$ = 8.269
Fair	29(64.4)	113(48.1)	**p = 0.016**
Good	3(6.7)	5(2.1)	

Majority of respondents who reported smoking marijuana were aged 30 -44years..There was statistically significant association between smoking of marijuana and age of respondent (χ^2= 21.195, p=

0.00).Virtually all the respondents who smoke marijuana were Muslims. Large proportions of respondents who smoke marijuana have driving license. There was association between smoking of marijuana and having driving license (χ^2= 8.936, p= 0.03). There was statistically significant association between the smoking of marijuana and knowledge on negative health effects of substance use (χ2=17.131, P =0.00).

Table 15: Binary logistic regression for determinants of smoking Marijuana

			95%Convidence interval	
Variables	**P-value**	**Odd ratio**	**Lower**	**Upper**

Age	0.00	0.343	0.195	0.606
<44/>45 years				
Do you have a driving license	0.208	0.530	0.197	1.424
No/Yes				
Knowledge level	0.999	14384365	1.829	108.810
Poor/Good				

Age of respondents is a significant predictor of marijuana use,respondents <45years are more likely to use marijuana compared to those who are above 45years(OR = 0.343, 95% CI =0.195 – 0.606 , p= 0.00).

Table 16: Correlate of Alcohol consumption among the respondents

Variables	Alcohol use		Test statistics
	Yes	No	
	n(%) n=30	n(%) n=250	
Age group (in years)			
<30	4(13.3)	30(12.0)	$\chi2 = 4.252$
30-44	11(36.7)	139(55.6)	P = 0.119
45 and above	15(50.0)	81(32.4)	
Religion			
Christianity	6(20.0)	9(3.6)	$\chi2 = 14.209$
Islam	24(80.0)	24(9.6)	P = **0.00**
Have another sexual partner			
No	12(40.0)	161(64.4)	$\chi2 =7.750$
Yes	18(60.0)	83(33.2)	P = 0.005
Sexual partners in categories			
<2 SP	7(23.3)	17(6.8)	$\chi2 = 2.573$
2SP and above	12(40.0)	69(27.6)	P = 0.109
Can substance use affect health negatively?			
No	1(3.3)	75(30.0)	$\chi2 = 9.693$
Yes	29(96.7)	174(69.6)	P = **0.02**
Have you had accident as a result of psychoactive substance use			
No	28(93.3)	180(72.0)	$\chi2 = 4.313$
Yes	2(6.7)	2(0.8)	P = **0.038**
Knowledge of harmful effect of Psychoactive substance			
Poor	14(46.7)	116(46.4)	$\chi2 = 1.006$
Fair	16(53.3)	126(50.4)	p = 0.605
Good	0(0.0)	8(3.3)	

There was statistically significant association between consumption of alcohol and religion of respondent ($\chi2=14.209$, p=0.00).

Many of those who consume alcohol have another sexual partner. There was statistically significant association between having sexual partners and the use of Alcohol ($\chi2 =7.750$, p = 0.005).

Fifty percent (50.0%) of the respondents who drink alcohol knew the negative health effects of substance use. There was statistically significant association between alcohol consumption and the knowledge of respondents on negative effects of substance use ($\chi2=9.693$, p =0.02).

Table17: Binary logistic regression for determinants of Alcohol consumption

			95%Confidence interval	
Variables	**P-value**	**Odd ratio**	**Lower**	**Upper**
Religion	0.00	0.096	0.026	0.358
Christianity/Islam				
Have Sexual partners	0.009	3.009	1.309	6.916
No/Yes				
Can substance use affect health negatively	**0.012**	14.432	1.819	114.54
No/Yes				

Respondents who were muslims were more likely not to use alcohol compared those who were christians(OR = 0.096, 95% CI=0.026 – 0.358, p= 0.00) and Respondents who has no sexual partners were 3 times more likely to use alcohol compared to those that have sexual partners.(OR = 3.009, 95% CI=1.30 - 6.916, p= 0.009).However,respondents who lack knowledg on negative health effects of substance use were almost 2 times more likely to use alcohol compared to those who has knoledge on negative effects of substance use (OR = 14.432, 95% CI=1.819 – 114.54, p= 0.012).

CHAPTER FIVE

5.0 DISCUSSION

The mean (±SD) age of the respondents was 40.63±10.09 years; this finding is similar to previous studies in Sokotoand Lagos where mean age of 43.32±8.1years and (37.2±8.0years) were reported respectively (Yunusa *et al*., 2012; Makanjuola *et al.*,2014) and that of Ozoh *et al*, (2017) done in Lagos, Nigeria where the mean age of the drivers was 44 years and ranged from 22 years to 76 years. The finding in this study was in contrasts with the study carried out in Kano metropolis, Nigeria where themean age 32.3±5.2yearsof the respondents was observed (Umar *et al*., 2017) and lower than the one obtained by Jefrey in Atlanta mean age (50.0±3.0years) and higher the one reported in UK(25.0 ±4.0years) (NHS, 2006).

It was found in this study that long distance drivers were entirely males, with no female participation at all. This further confirms the male domination of public transportation activities in Nigeria as found in similar studies (Fasak *et al*.,2010; Amoran *et al*., 2012; Yunusa *et al*., 2012;Issifou *et al*.,2016 and Makanjuola *et al*.,2014). However, in other counries like United Kingdom, female participation was 45.0% (National Travel Survey, 2015)

Virtually all the respondents were Muslims with a few Christians. Interestingly, both religions frowns at the use of stimulants or any substance that would alter the brain functions.It concurs with findings in study done in Ghana where approximately, 90 percent of the commercial drivers come from both religions and yet they are found to be users of psychoacive substance (Shaibu, 2014).

Majority of respondents in this study had multiple sexual partners, this is lower than the report from North India where 128(45.23%) out of 283 had more than five sexual partners (Singh *et al*.,2006),but lower in a study done in Bostwana where 62(20%) out of 247 participants reported having multiple sexual partners (Kalichman *et al*., 2007).

The findings in this study revealed that a significant numbers of respondents were educated and about one-third had secondary education, 23(8.2%) had tertiary education while 78(27.8%) of the respondents had Quranic education and only 7(2.5%) had no education. This is important because, interpretation of road signs requires a certain level of basic education. Similar to this study, Makanjuola *et al*, (2007) reported high literacy level (35.7%) among long distance drivers in Ilorin, Nigeria.This differs from findings by Adewale *et al* , (2013), where averagepercentage of long distance drivers that have never being to school was 123(41.0%),Primary 158 (52.7%), Secondary 19(6.3%).

Almost half of the respondents do not own their vehicle. This is important because, pressure from car owners makes majority of the drivers to indulge in consumption of psyhoacive substance because, if they are unable to ply more trips in a given duration, it may lead to loss of their job.This is contrary to another findings wheretwo-thrid (64%) of respondents did enjoy full ownership of their car (Adewale *et al*., 2013).

More than half of respondents knew that liver damage is the most common harmful effect of alcohol, this findings also similar to what was reported by American college of gastroenterology (Gyongyi and Pranoti, 2010). However, respondents also reported altered family relationship, hypertension, accident and brain damage as other known harmful effect of alcohol.

Mental illness was the commonest harmful effects of Marijuana that respondents knew, though respondents demonstrated fair knowledge on aggressions, tremor headache and heart disease. This contrast the findings of Nora *et al*.,(2006) in Canada that drug addiction is the most common harmful effects of marijuana. Average percentage of respondents in this study knew that the use of codeine can lead to arrest by law enforcement agents but demmonsrated poor knowledge on emotional problem,nervouseness and robbery. Mattia *et al*., (2015) in canada revealed that addiction is the most common hamful effect.

Significant proportion had knowlege that smoking can lead to premature death, as opposed to what was observed in United Kingdom, that the most common effect is lung cancer. Life-time smokers carry the risk of 15.9% dying from lung cancer (Rob Hicks *et al*., 2016)

The most common known harmful effects of amphetamine use was mental illness followed by tremor, emotional, headache and nervousness respectively (Sedrak *et al*., 2006). Weiss, 2016 revealed addiction as the commonest harmful effect of smoking of amphetamine.

Sixty-nine (60.0%) believed that the use of cocaine can lead to drug abuse similar study reported heart attack, mental illness (56.1%), while robbery was the least known effects of cocaine use.

Drug abuse, were the highest knowledge the respondents had about the harmful effect associated with the use of Trammadol. Next to it was mental illness while others reported liver damage (Labate *et al*., (2005) reported respiratory depression and Jovanovic *et al*.,(2006) reported seizure disorder as the common harmful effects of Trammadol.

The harmful effects of local stimulants tea cannot be over emphasized, leading knowledge of the respondents on the harmful effects associated with the use of local stimulant tea was mental illness, few of them knew it can also cause headache while emotional disorder 36 has the lowest response from respondents. However, the respondents demonstrated fair level of knowledge on the harmful effect of psychoactive substance use.

Inability to sleep was the highest knowledge the respondents had on the harmful effect on the use of kola nut, few respondents agreed it can lead to high blood pressure while restlessness or nervousness was shown to be the least knowledge the respondents had. Sudakov *et al*., (2003); Umoren *et al*., (2006) reported weight loss and depression respectively.

Furthermore, more than half of the respondents in this study had fair knowledge on the harmful effects of psychoactive substance use. Averagelevel of knowledge demonstrated by respondents may be attributed to regular advertisements on some substances in the media that

continuous use of such substances is injurious to their health. A good example is;“smokers are liable to die young” that usually end the advertisement of cigarette smoking.This finding was in accord with the report ofMalara et. al 2006; Odejide, 2009; Dechenla, Ranabir and Aparjita, 2010; Awosusi and Joseph 2013, these researchers asserted that their respondents had average level of knowledge on the health effects of substances use. Although, high level of knowledge was demonstrated in Ghana where, 66% of the respondents stated that the use of the substance had positive effect on them while only 22 % of respondents stated that the substance had negative impact on them (Samuel *et al* 2016). On the contrary, the findings of this study disagreed with Olaitan (2006); Oshodi *et al*., (2010) and Nwankwo *et al*., (2013). These researchers discovered that the knowledge of health effects of substance use was insufficient and that their respondents demonstrated poor knowledge of the harmful effects of substance they use.

In this study, five substances were commonly used by the respondents, cigarette, kola nut, local stimulant tea, marijuana and alcohol. This finding was consistent with Hamdi *et al*., (2013) which reported that Tobacco (50.3%), Caffeine (44.1%), Kolanut(42.6%), Trammadol (27.2%) and Indian hemp (24.6%), were commonly used substance. Emiola, (1990) also reported that the three common drugs among drivers were marijuana, alcohol and tobacco/cigarette this contrast Igwe *et al*., (2009) and Al-Haqwi, (2010) reported that alcohol was the most commonly used substance, these differences may be due to the fact that alcohol and other psychoactive substances of various types are socially tolerated, accessible, affordable and easily available in some society as opposed to our study area where alcohol was not tolerable.

More than half of the respondents access the psychoactive substance from street vendor, almost half of respondents access theirs from friends, while others got it theirs from Motor Park.

A high percentage of the respondents reported that, they bought their psychoactive substance and about one-third of them through errand while few respondents got it as souvenir.

Majority of respondents reported that psychoactive substance enhances their driving ability; prevent sleeping while driving and personal pleasure. Similar pattern was demonstrated in a study done in Ghana where the commonest among the reasons were; feeling sleepy without drug, relieves fatigue, to drive for long hours and pressure from car owners (Shaibu 2014; Hamdi *et al*., 2013) and to relieve depression, to enhance alertness, to keep awake at night, peer pressure and to enhance sexual performance (Movig *et al*., 2004).

This study revealed that religion, numbers of sexual partners and knowledge on negative health effects of substance use were significantly associated with cigarette smoking. Majority of the smokers knew that cigarette can cause harm, but their knowledge has not transformed to good behavior. Respondents who knew that cigarette smoking has no negative effect on the body were four-times more likely to smoke cigarette than those who knew it has negative effect on the body**.** This is congruent with Eneh and Stanley (2004) and Raute *et al*., (2011), who reported that the knowledge of the detrimental effects of a substance on the health of the user did not prevent drivers from using it. Meanwhile Shafiq *et al*., (2006) reported that the greater the knowledge of harmful effects of substance, the lesser the consumption of such substance. The negative significant relationship between knowledge of health effects and substances use was in line with the report of Ndom, Adelekan (1996) and Adekoya *et al*., (2011).

Majority of respondents who consume kola nut were age 45 and above. They also knew it can cause negative health effects. The age of the respondents is a significant predictor of kola nut use. Respondents from 45 and above were more likely to take kola nut despite their knowledge on its health effects than those less than 44years. This could be due to the kola nut being easily available and commonly used in the society, and the users also being accepted by their community. Also, kola nut is widely consumed for traditional and social reasons in Nigeria as well as for stimulants effects; therefore, it is not surprising that most of the drivers consume it. However, caffeine content of kola nut which is a CNS stimulant capable of causing insomnia has made the use increased by the drivers due to this property. There was a statistically

significant association between having sexual partners and consumption of local stimulant tea. Those that had no sexual partners were two-times more likely to take local stimulants tea. However, majority of the local stimulants users knew it can cause negative health effects but their knowledge was not commensurate to their behavior and they were two-times more likely to take local stimulants tea. This was also observed by Amoran *et al*., (2012) that no significant association between having sexual partners and consumption of local stimulants tea (local gin, herbal gin mixture and local corn brews).

There was a statistically significant association between the age of respondents and marijuana use.Most of the users of Marijuana were between 30-44years,majority of those who have driving licence do not smoke marijuana. Age of respondents is a significant predictor of marijuana use,respondents <45years are more likely to use marijuana compared to those who are above 45years.Respondents between the age of 30-44years were two-three times more likely to smoke marijuana.This is similar to study done in Ghana where age and occupation were predictors of smoking marijuana (Samuel *et al*., 2016).

Religion, knowledge on negative health effects of substance use and having had previous accidents as are sulk of psychoactive substance use were statistically significant associated with alcohol use. Respondents who were Muslims were more likely not to use alcohol compared to those who were Christians. Respondents that knew negative effects of alcohol were fourteen-times more likely to take alcoholand respondents who had no sexual partners were three-times more likely to use alcohol compared to those that have sexual partners. This differs from what was reported in Calabar (Okafor *et al*, 2016), in which the determinants of alcohol use were history of use by parents**,** (OR-2.7.CI=1.1-6.3)**,** Friends (OR =3.2,CI=1.3-7.8) and availabilit**y** (OR=4.1,CI=1.9=8.8) also Eneh and Stanley, (2004) and Raute *et al*., (2011) reported that the knowledge of the detrimental effects of substance on the health of the user did not prevent them from using the substance.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study revealed that the knowledge of health effects of alcohol, tobacco and marijuana use was considerably fair among the respondents. Majority of drivers bought their psychoactive substance from street vendors and effects of psychoactive substance on the respondents were to enhance their driving ability, prevent sleeping while driving and personal pleasure.

Age of respondents, knowledge of negative effect of psychoactive substance and having sexual partners influenced consumption of psychoactive substance by long distance drivers.

Predictors of substance use by long distance vehicle drivers in Sokoto were age, religion and knowledge of negative effect of psychoactive substance.

6.2 Recommendations

Based on the findings of this study, the following recommendations have been proposed.

1**.** Though, there was average level of knowledge of health effects among the respondents, therefore, there is need for more health education on the consumption of alcohol and other psychoactive substance by public health workers in collaboration with National Drugs Law Enforcement Agency(NDLEA) to be specifically targeted towards long distance drivers in Nigeria, this will reduce hazardous use of alcohol and other psychoactive substances with their medical, psychosocial, environmental and legal effects.

2. The government agencies (NDLEA, Police etc.) should find visible and technical way of curbing any form of street hawking of psychoactive substances. This would in turn help mitigate the hazard of psychoactive substance use by long distance drivers in the country.

3. There is the need for further research on this similar topic at regular interval by both private and public health personnel to help ameliorate national omen of drug abuse, public awareness on damage of life and body due to psychoactive substance use among long distance vehicle drivers.

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APPENDIX I

QUESTIONNAIRE

Serial No: [ ]

Date: ……

Dear Respondent,

I am a postgraduate student from the Department of Community Health, College of Health Sciences, Usmanu Danfodiyo University Sokoto, Sokoto State. This research study tends to find out the ***Determinants of Psychoactive Substance use among Long Distance Vehicle drivers in Sokoto, North-western Nigeria*.**

Introduction

Please, carefully read and answer all questions stated below. The researcher shall as well as handle your responses with utmost secrecy. Use mark [√] to indicate your answer where necessary.

Thank you!

Dr. Hamzat, Abdullahi
Department of Community Health,
Usmanu Danfodiyo University, Sokoto.

SECTION A: Socio-Demographic Characteristics of Respondents

1. Age [in years] _____

2. Sex: Male [ ] Female [ ]

3. Religion: Christian [ ] Islam [ ] others [Please specify] _____

4. Marital Status: Single [ ] Married [ ] Divorced [ ] Married but living apart [ ]

5. Do you have another sexual partner apart from your wife, if married?

Yes [ ] Go to Q6 No [ ] Go to Q7

6. How many sexual partner(s)? _____

7. Highest level of Education: None [ ] Quranic [ ] Primary [ ]

Secondary [ ] Tertiary [ ]

8. Average income per month----------

9. How long have you been a long distance driver? [In years] _____

10. Do you have a driving license? Yes [ ] No [ ] If yes, _____ (verify)

11. Do you own the vehicle you drive? Yes[ ] No[ ]

***SECTION B*: Knowledge of Respondents about harmful effects of psychoactive substance.** . 12.Harmful effects occur when psychoactive substances cause damage to the health? Yes [ ] No [ ]

13. Can substance use affect health negatively? (a) Yes (b) No (c) I don't know.

If yes to Q 13 answer Q 14 to 24{Multiple response allowed}. If NO move to Q 25

14 Can use of alcohol cause these ? (a) liver damage (b) Alter family relationship (c) High blood pressure (d) Leads to accident.(e) Brain damage.

15.Can use of Marijuana (wewe', ganye) leads to the following effects? (a)Headache (b) Hand tremors (c) Increased aggressiveness (d) Mental illness (e) Heart disease

16. Can use of Codeine cause the following effects? (a)) Emotional problem(b) Arrest by law enforcement agents.(c) Restlessness/Nervousness (d) Lead one into robbery (e)Mental illness.

17. Can Cigarette smoking leads to these effects ?(a) Disease of the lungs (b) High blood pressure

(c) Premature death (d) Heart disease (e) Oral cancer.

18. Can use of Amphetamin cause ?(a) Headache (b)Hand tremors (c) Emotional problem (d) Restlessness/Nervousness (e) Mental illness.

19. Can use of Cocaine leads to?(a) Drug abuse (b) Restlessness/Nervousness (c) Mental illness(d)Robbery (e) Depression.

20. Can use of Trammadol leads to? (a)) Drug abuse (b) Mental illness. (c)kidney damage(d) Inability to sleep (e)) Liver damage.

21. Can use of Local stimulant tea (Gadagi) cause ?(a) Headache (b)Restlessness/Nervousness(c) Emotional problem (d) Mental illness(e) Hand tremors.

22. Can use of Cola-nut cause? (a) Inability to sleep(b) oral cancer(c) High blood pressure (d) Restlessness/Nervousness(e) Emotional problem.

23. Through which medium do you acquire the information on harmful effect of the psychoactive substances? Public Awareness [ ] Peer Education [ ] personal Reading [ ]

24. How does the information you acquired about harmful effect of psychoactive substance affect your consumption of the substances?

Increase consumption [ ] Decrease consumption [ ] About the same consumption [ ]

does not have any effect [ ]

SECTION C: Types of psychoactive substance in use by long distance drivers in Sokoto.

Have you taken any of the below psychoactive substances in the past 2 weeks?

25. Alcohol Yes [ ] No [ ]

26. Marijuana (wewe‘, ganye) Yes [ ] No [ ]

27. Codeine Yes [ ] No [ ]

28. Cigarette Yes [ ] No [ ]

29. Amphetamine Yes [ ] No [ ]

30. Cocaine Yes [ ] No [ ]

31. Trammadol Yes [ ] No [ ]

32. Local stimulant tea(Gadagi) Yes [ ] No [ ]

33. Cola-nut Yes [ ] No [ ]

34. Others specify_____

SECTION D: Accessibility of the psychoactive substances to the respondents

35. If yes to section C, where do you get the psychoactive substance you use from (multiple responses allowed)?

From friends [ ] Street vendors [ ] Bar or Park [ ] Store or Shop [ ]

Mammy market [ ] Others [ ]

36. How do you get the type of psychoactive substance you use?

I buy it [ ] As souvenir [ ] Through errand [ ] Through supplier [ ] Link from friends [ ]

Others [ ]

SECTION E: Effect of the psychoactive substance used among respondents

37. Does the psychoactive substance have any of the following effect on you? (multiple respone allowed)

A. enhancing driving ability [ ] B. prevent sleeping while driving [ ] C. personal pleasure [ ] D. to feel belong [ ] E. to get relief from tension [ ] F. to increase pleasure during sex [ ]

38. Have you had an accident as a result of psychoactive substance yes [ ] No [ ]

39. How much do you think the psychoactive substance can cost you per day? Specify------