Title Page

Tobacco Use Knowledge, Attitude and Practice Among Students in Tertiary Institutions in Kogi State, Nigeria.

A Project Report Submitted to the Department of Health and Physical Education University of Nigeria, Nsukka. In Fulfillment of the Requirements for the Award of Masters of Education (M.Ed) Degree in Public Health Education

By

Atuluku Gabriel
PG/M.Ed/08/49078

January, 2013.

Approval Page

This project report of **Atuluku Gabriel** has been approved for the Department of Health and Physical Education, University of Nigeria, Nsukka.

By

Tr. Prof. E.S Samuel
Supervisor

Dr. (Mrs) C.N Ogbuji
Internal Examiner

Dr. Maria M Ikorok
External Examiner

Prof. O.C Ene
Head of Department

Prof. Ike, Ifelunni
Dean:
Faculty of Education.

Certification

Atuluku Gabriel, a postgraduate Student in the Department of Health and Physical Education, with Registration Number PG/M.Ed./08/49078 has satisfactorily completed the requirements for the Masters Degree in Public Health Education (M.Ed). The work embodied in the project is original and has not been submitted in part or full for any Diploma or Degree of this or any other University.

_____	_____
Atuluku Gabriel Student	Tr. Prof. E. S. Samuel Supervisor
_____	_____
Date	Date

Dedication

This work is dedicated to Almighty God.

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University of Nigeria, Nsukka.

Table of Contents

Title Page	i
Approval Page	ii
Certification	iii
Dedication	iv
Acknowledgements	v
Table of Contents	vi
List of Tables	ix
List of Acronyms	x
Abstract	xi
CHAPTER ONE: Introduction	
Background to the Study	1
Statement of the Problem	8
Purpose of the Study	9
Research Questions	9
Hypotheses	10
Significance of the Study	11
Scope of the Study	12
CHPATER TWO: Review of Related Literature	
Conceptual Framework	13
Tobacco and tobacco use	14
Constituents of tobacco	15
Reasons for tobacco use	15
Harmful effects of tobacco in the body	17
Knowledge, attitude and practice	19
Socio-demographic factors associated with tobacco use knowledge, attitude and practice	20
Measurement of knowledge, attitude and practice of tobacco use	22
Schematic Representation of the Conceptual Framework	25
Theoretical Framework	25
Social learning theory	26

Theory of Reasoned Action (TRA) 27
The Theory of Planned Behaviour (TPB) 28
Self-efficacy theory (SET) 29
Schematic representation of theoretical frame work 30
Empirical Studies on Tobacco Use Knowledge, Attitude and Practice among Students in Tertiary Instructions 30
Summary of Literature Review 42
CHAPTEER THREE: Methods
Research Design 44
Area of the Study 44
Population for the Study 45
Sample and Sampling Techniques 45
Instrument for Data Collection 47
Validity of the instrument 47
Reliability of the instrument 47
Method of Data Collection 48
Method of Data Analysis 48
CHAPTER FOUR: Result and Discussion
Results 50
Summary of Major Findings 64
Discussion 65
Tobacco use knowledge among students in tertiary institutions 65
Tobacco use attitude among students in tertiary institutions 66
Tobacco use practice of students in tertiary institutions 67
Differences in tobacco used knowledge, attitude and practice of students in tertiary institutions 68
CHAPTER FIVE: Summary, Conclusions, and Recommendations
Summary 70
Conclusions 72
Recommendations 73
Suggestions for further study 74

References 75
Appendices 75
Appendix A 82
Appendix B 83
Appendix C 84
Appendix D 88
Appendix E 89

List of Tables

StudentsôLevel of Knowledge of Tobacco Use 50
Attitude of Students Towards Tobacco Use (n = 395) 51
Students Practice of Tobacco Use (n = 395) 52
Level of Knowledge Possessed by the Students According to Age (n = 395) 53
Level of Knowledge Possessed by Students According to Gender 53
Attitude of students in tertiary institutions towards tobacco use according to age 54
Attitude of Students in Tertiary Institutions Towards Tobacco Use
According to Gender 55
Practice of Tobacco Use According to Age 56
Practice of Tobacco Use According to Gender 58
Summary of t-Test Analysis Testing the Null-Hypothesis of No Significance
Difference in Tobacco Use Knowledge Between Male and Female Students 59
Summary of t-Test Analysis Testing the Null hypothesis of No Significant
Difference in Tobacco Use Knowledge of Students According to Age 60
Summary of t-Test Analysis Testing the Null Hypothesis of No Significant
Difference in Tobacco Use Attitude of Students According to Gender 60
Summary of t-Test Analysis Testing the Null Hypothesis of No Significant
Difference in Tobacco Use Attitude of Students According to Age 61
Summary of Chi-square Analysis Testing the Null Hypothesis of No
Significant Difference in Tobacco Use Practice of Students According to Gender 62
Summary of Chi-square Analysis Testing the Null Hypothesis of No Significant
Difference in Tobacco Use Practice of Students According to Age 63

Acronyms

Acquired Immune Deficiency Syndrome ï AIDS

Agree ï A

Analysis of Variance ï ANOVA

Centre for Disease Control and Prevention ï CDCP

Centre on Addition and Substance Abuse ï CASA

Disagree ï D

Environmental Tobacco Smoking ï ETS

Fagerstrom Test for Nicotine Dependency (FTND)

Federal Capital Territory ï FCT

Knowledge Attitude and Practice ï KAP

Kogi State College of Education ï KSCOE

Kogi State Polytechnic ï KSP

Kogi State University ï KSU

Local Government Areas ï LGAs

Roll ï Your ï Own ï RYO

School of Health Technology ï SHT

Self-efficacy Theory ï SET

Social Learning Theory ï SLT

Standard Deviation (SD)

Statistical Packages for Social Sciences ï SPSS

Strongly Agree ï SA

Strongly Disagree - SD

Systematic Random Sampling ï SRS

Theory of Planned Behaviour ï TPB

Theory of Reasoned Action ï TRA

Tobacco ï Specific Nitrosamines (TSNAS)

Tobacco Use Knowledge, Attitude and Practice Questionnaire ï TUKAPQ

United State ï US

United state of America ï USA

World Health Organization ï WHO

Abstract

The purpose of the study was to determine tobacco use knowledge, attitude and practice among students in tertiary institutions in Kogi State, Nigeria. Nine specific objectives with nine corresponding research questions were formulated. Six null hypotheses were postulated which guided the study. Demographic variables of age and gender were also investigated. Descriptive survey research design was used for the study. The population for the study comprised of 31,600 students drawn from the four selected tertiary institutions in Kogi State, while the sample for the study consisted of 395. A-40 item researcher designed questionnaire comprising of four sections (A, B, C and D) was the instrument used for data collection. The instrument was validated by four experts from the Department of Health and Physical Education and one from the Department of Statistics all of the university of Nigeria, Nsukka. Percentages and means using Ashurôs (1977) critension, slightly modified by Okafor (1997) were utilized for answering the research questions bothering on knowledge, while modified 4-points scale by Osuala (2005), were used to answer research questions on attitude. Frequency and percentages were utilized to analyze the responses on practice questions. The t-Test statistics was used to test the null hypotheses one to four at .05 level of significance, while Chi-square statistic was employed to test the null hypotheses five and six at .05 level of significance. Results of the study showed that students in tertiary institutions had very high level of knowledge of tobacco use. Students in tertiary institutions had negative attitude towards tobacco use. Majority of the students in tertiary institutions had practiced tobacco use. Students in tertiary institutions aged 18 years and above had very high level of knowledge while those aged 16-17years had high level of knowledge regarding tobacco use. Male and female students in tertiary institutions had negative attitude towards tobacco use. All age groups of students in tertiary institutions had practiced tobacco use. Female and male students in tertiary institutions had practiced tobacco use. There was no significant difference in the level of knowledge possessed by both male and female students in tertiary institutions regarding tobacco use. There was no significant difference in the level of knowledge possessed by both male and female students in tertiary institutions regarding tobacco use according to age. There was no significant difference in tobacco use attitude of the students in tertiary institutions according to gender. There was no significant difference in tobacco use attitude of the students in tertiary institutions according age. There was no significant difference in tobacco use practice of the students in tertiary institutions according to gender. There was no significant difference in tobacco use practice of the students in tertiary institutions according to age. Following from the findings of the study, the following recommendations were made: Education regarding smoking should begin early in the primary school. Parents, teachers and other adults are to supervise and educate the children that smoking is an unfavourable habit which should not be attempted.

TOBACCO USE KNOWLEDGE, ATTITUDE AND PRACTICE AMONG STUDENTS IN TERTIARY INSTITUTIONS IN KOGI STATE, NIGERIA

BY

ATULUKU GABRIEL
PG/M.Ed/08/49078

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION,
UNIVERSITY OF NIGERIA, NSUKKA

SUPERVISOR: Tr. PROFFESSOR. E.S. SAMUEL

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CHAPTER ONE

Introduction

Background to the Study

Tobacco use cuts across not only age but religion, occupation, social and economic levels. According to World Health Organization, WHO (2001) tobacco use is the single most important preventable cause of disease and premature death in the world today and that more people smoke today than any other times in human history. The report maintained that prolonged smoking is a leading behavioural cause of disability and premature mortality resulting in approximately four million deaths annually worldwide. Centre for Disease Control and Prevention-CDCP, (2001) reported that although smoking kills more people than AIDS, alcohol, drug abuse, car crashes, murders, suicides and fires combined each year, approximately one-third of the global adult population or 1.1 billion have chosen to smoke.

This astonishing figure includes many young and school-aged users in the world. This figure may include Nigerians. The WHO (2001) further stated that in the United States (US), 80 per cent of adult smokers started smoking before the age of 18 years and nearly 3000 young people in the same age-bracket become regular smokers every day, and that if nothing is done to stop current trends, more than five million students living today will die prematurely because of a decision they make to smoke cigarettes when they are adolescents.

WHO (2002) stated that tobacco is a known cause of about 25 diseases and its impact on global disease burden is increasing continuously, and that tobacco kills nearly 10,000 people worldwide every day. Mackay and Ericksen (2002) opined that tobacco kills half of all life time users, half die in middle age between 35 and 69 years old. According to them, no other consumer product is as dangerous as tobacco. They further stated that tobacco is the only legally available consumer product which kills people when it is entirely used as intended. Furthermore, they maintained that while the most serious effects of tobacco use normally occur after decades of smoking, there are also immediate negative health effects for younger smokers. However, they asserted that most smokers especially teenagers are already addicted during adolescence and that the

younger a person is when he/she begins to smoke, the greater the risk of eventually contracting smoking related diseases such as cancer, or other heart diseases.

Kvis, Clark, Crittenden, Warnekke, and Freels (1999) found that younger smokers (18-29 years of age) are less concerned about health outcomes associated with smoking, than older' adults. Similarly, Steptoe and Wardle (2001) opined that younger smokers, such as students in tertiary institutions do not heed smoking - associated health warning. Kear (2002) submitted that although cigarette smoking among adults has steadily declined over the past decade, smoking among students in tertiary institutions has risen sharply. Mackay and Ericksen (2002)/ opined that the overwhelming majority of smokers begin tobacco use before they reach adulthood and that among those young people who smoke, nearly one-quarter smoked their first cigarette before they reached the age of ten.

Sinha, Gupta, and Pednekar (2002) and WHO (2002) opined that tobacco use is often initiated during adolescence. According to American Lung Association (2002), approximately 90 per cent of smokers begin smoking before the age of 21 years. The National Statistics (2002) reported that by the age of 11 years one-third of students, and by 16th year, two-thirds of students have experimented with smoking. Although there is conflicting opinion as to the age of initiation into tobacco smoking, the truth is that most adolescents start smoking before they reach adulthood.

Spear and Kulbok (2001) pointed out that youths who smoke and drink have an increased risk of having difficulties at school, delinquency, and use of other drugs. WHO (2002) stated that tobacco affects adolescents in a number of ways; that active smoking by young people is associated with significant health problems. The report further stated that as with alcohol, adolescent cigarette smoking is strongly associated with illicit drug use. Youths who consistently smoke throughout adolescence are at significantly greater risk of marijuana and drug abuse and dependency. The report further asserted that tobacco and alcohol, often referred to as "gate way drugs", are among the first substances consumed by adolescents. Orlando, Tucker, and Ellickson (2005) pointed out that adolescents who report consistent smoking and drinking have higher rates of deviant behaviour and violence and are more likely to have legal and substance use problems in their 20s than those who consistently drink but not regular smokers. The researchers noted further that while it is common during adolescence to drink but not smoke, it is

very unusual to smoke and not drink, suggesting that smoking is a reliable marker of adolescent alcohol use.

Mackay and Ericksen (2002) remarked that several factors increase the risk of youth smoking; these include, tobacco industry advertising and promotion, easy access to tobacco products, and low prices, peer pressure and sibling smoking. Other risk factors associated with youth smoking mentioned by the authors include having a lower self-image than peers, and perceiving that tobacco use is normal or "cool". Factors that commonly play a role in the initiation of smoking among adolescents include social factors (high level of social acceptability, marketing efforts, role modeling by parents and other family members (Avenevoli & Merikangas, 2003; Komro, McCarty, & Forster, 2003).

Hala, Al-Sahab and Akkay (2007) opined that from age 10 to 19 years, adolescents pass through a transitional phase in life in which their future personalities and bahaviours are sharpened or modified and set for years to come. Furthermore, it is believed that adolescents, who make up around 1.2 billion of the world's 6 billion inhabitants, are facing a form of tobacco intimidation at an early point in their lives. According to the authors, the association of health problems with cigarette smoking has been established, and smoking has been proven to be a major cause of lung cancer, chronic obstructive lung disease, and coronary heart (CHD) disease among others. There is sufficient evidence to conclude that tobacco smoking is strongly linked to tuberculosis (TB) and a large proportion of TB patients may be active smokers (WHO, 2008). The report noted that a previous analysis had suggested that a considerable proportion of the global burden of TB may be attributable to smoking. Pai, Mohan, Dheda, Leung, Yew, Christopher and Sharma (2007) stated that TB and tobacco use are regarded as two colliding epidemics of public health importance. According to them, recent estimates have shown that the two formidable epidemics kill more than six million people worldwide annually. Furthermore; in recent years, there has been a global explosion of interest on the association between TB and exposure to tobacco smoke (WHO, 2008).

Ewuzie (2005) reported that the habit of cigarette smoking was introduced into Nigeria around 1902 by European traders and that local manufacture of cigarette started in 1935 suggesting that tobacco use has gained firm root in Nigeria already. Hahn and

Payne (1997) stated that tobacco use remains a significant problem for college students. Similarly, Olufemi (1999) opined that tobacco use has been identified as being among the topical problems confronting the nation's schools. Based on the above information, it has become necessary to investigate tobacco use knowledge, attitude and practice (KAP) among students in tertiary instutions.

Tobacco, according to Ewuzie (2005) is an herb which has been smoked, chewed, and or sniffed for more than five hundred years. The author further stated that tobacco plant belongs to the Nicothiniana genus. It can be consumed, used as an organic pesticide and, in the form of nicotine tartrate, used in some medicine. Tobacco is a nervous system stimulant that triggers complex biochemical and neurotransmitter disruptions (Basic Facts about Drugs 2010). It elevates heart rate and blood pressure, constricts vessels, irritates lung tissue, and diminishes oneôs ability to taste and smell. Basic Facts about Drugs (2010) stated that tobacco is a plant that comes in two varieties, nicotiana tabaccum and nicotiana rustica. The latter is the most cultivated of the two and the source of the entire tobacco produced world over including Nigeria. This study adopts the definition of tobacco given by Basic Facts about Drugs (2010). When people use tobacco in any form, it is referred to as tobacco use.

Tobacco use has been described by Mackay and Ericksen (2002) as the consumption of tobacco product by burning, chewing, inhalation, sniffing, and sucking. Moronkola (1999) defined tobacco use as the use of tobacco generally. Philip (2008) stated that tobacco can be processed, dried, rolled and smoked as cigarettes, cigars, bidis (thin-rolled cigarettes imported from South East Asia) and clove cigarettes. Another form is Kreteks (cigarettes imported from Indonesia that contain cloves and other addictive). Loose-leaf tobacco can be smoked in pipes and hookahs (an Asian smoking pipe with a long tube that passes through an urn of water). The two most common forms of smokeless tobacco are chewing tobacco and snuff (finely ground tobacco placed between the gum and lip). In this present study, tobacco use refers to any form in which tobacco is taken into the body by man. This study was interested in cigarette smoking, chewing tobacco and snuffing as may be found among students in tertiary institutions which could be influenced by their knowledge of tobacco use and its corresponding dangers or reasons why they consume the products.

Kirikhan (1984) defined knowledge as expertise/ and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject or what is known in a particular field or in total; facts and information; or to be absolutely certain or sure about something. Omeregbe (1998) asserted that knowledge is that fact of understanding, relevant issues, or objects .that is acquired either through learning or experiences. Kant (2000) opined that one needs sense perception as well as reason to produce knowledge. The author made this clear by projecting three things that are involved in the act of sense-perception that give rise to knowledge/ namely: the object perceived, the sense organ with which it is perceived, and the ego or consciousness or the subject that interprets what is perceived and gives it meaning. Furthermore, the author asserted that the senses in themselves cannot give meaning to the objects of sense-perception without the ego. Knowledge means information, understating and skills that one gain through education or experience (Hornby, 2009).

Knowledge can be classified into various kinds: empirical knowledge, inferential knowledge, intuitive knowledge and prior knowledge (Omeregbe, 1998). Empirical knowledge according to Omeregbe (1998) is the knowledge acquired through sense perception that is through any of the five senses. Inferential knowledge is the type of knowledge that is acquired by inference (Kant, 2000). The intuitive knowledge is knowledge gained by feelings rather than considering the facts, (Hornby, 2009). This implies that it is knowledge that is acquired directly by an immediate contact of the mind with the object without going through the process of reasoning. Kant (2000) described prior knowledge as knowledge acquired prior to experience and independent of experience. In other words, it is knowledge acquired by reason without experience. From the above description of knowledge, the present study is interested in empirical knowledge because students acquire knowledge of tobacco use as a result of the interaction with the social environment, peer groups, family members books and other role models, actors and actresses and teachers who may use tobacco. When knowledge relates to tobacco use, it is called tobacco use knowledge. Tobacco use knowledge as used in this study refers to the understanding of the constituents of tobacco and the potential dangers or health hazards of tobacco including physiological, psychological and

social problems of its use. This knowledge has influence on the attitude of students regarding its use.

Attitude has been variously defined by authors or scholars Anderson (1981) defined attitude as a moderately intense emotion that prepares or predisposes individual to respond consistently in a favourable or unfavourable manner when confronted with one's feeling with a particular object. Meyers (1996) maintained that attitude is a favourable or unfavourable evaluative reaction towards something or somebody exhibited in one's beliefs, feelings or intended actions. The author went further to report that attitudes are learned through environment by the genes. Moghaddam (1998) refers to attitude as the evaluations of other peopleôs events, issues and material things, with degree of favour or disfavour. Lambert and Lambert (2007) refers to attitude as an organized and consistent manner of thinking, feeling and reacting to people, groups, social issues or any event in one's environment. Hornby (2009) defined attitude as the way that one thinks and feels about somebody or something; the way that one behaves towards somebody or something that show how he or she thinks and feels. When attitude relates to tobacco use, it is termed tobacco use attitude. The present study, adopts the definition of attitude given by Moghaddam (1998), as the various ways students in tertiary institutions feel or response to tobacco use which can either be favourable or unfavourable. The attitude students in tertiary institutions have towards tobacco and its use can influence their practice or use of tobacco.

Practice according to Brainy (2009) is defined as the way to carry out things, act upon, to communicate, to execute or to do something. Hornby (2009) defined practice as a way of doing something regularly, a habit or custom. Practice simply means action. It is a process or procedure of doing things. In the context of the present study, practice refers to the actual use or consumption of tobacco by students in tertiary institutions.

Students in tertiary institutions are those people studying in the higher institutions of learning. Hornby (2009) described students in tertiary institution as those studying or undergoing training in the University or college of education or technology after secondary school. In this study, students in tertiary institutions refer to students studying in the tertiary institutions or post-secondary schools like university, college of education

and polytechnics. Studentsô knowledge, attitude and practice are being affected by some demographic factors.

There are some socio-demographic factors that may be capable of influencing or affecting the knowledge, attitude and practice of students to tobacco use. They include, gender, age, smoking status of parents, smoking status of siblings and peer pressures (Mackay & Ericksen 2002; Avenevoli & Merikagas, 2003; Komro, McCarty, & Forster, 2003). This present study took into cognizance only gender and age as socio-demographic factors.

Gender is a variable that has received consistent attention among researchers (Arcury & Christianson, 1993). The common reason advanced for gender differences is the difference in socialization patterns between boys and girls (Raudsepp, 2001). Mackay and Ericksen (2002) mentioned that smoking behaviour of females differs from that of males and that females are more highly motivated to smoke than males. Females are more likely than males to practice protective health behaviours, whereas male gender is a significant predictor of smoking initiation among adolescents (Boehm, 1993).

Reports from researchers have indicated that age has influence on knowledge, attitude and practice of tobacco use among students in tertiary institutions. Escobedo, Anda, Smith Remington and Mast (1990), and Escabedo, Marcus, Holtman and Giviano (1993), have reported that majority of adult smokers started smoking before the age of 18 years. Knowledge, attitude and practice of students in tertiary institutions towards tobacco use anchor on theory.

The study was anchored on four theories. These theories include; the Theory of Planned Behaviour (TPB), the Theory of Reasoned Action (TRA) Self Efficacy Theory (SET) and Social Learning Theory (SLT). These theories were used as theories of anchor on knowledge, attitude and practice of students in tertiary institutions towards tobacco use in the present study in Kogi State.

Kogi State came into being as a result of the state creation on 27th August, 1991 with its administrative headquarters in Lokoja. The state is structured into 21 local government areas (LGAs) comprising of three major ethnic groups of Igala, Ebira and Okun (Yoruba). Other minor groups include Ogori-Mangongo, Bassa-Komo, Bassa-Nge and Gwari. The state is bordered by nine other states and is the most centrally located

state in Nigeria. It is the confluence state with River Niger and Benue meeting at Lokoja the state capital. It has been observed that the extents to which students in tertiary institutions in Nigeria portray their level of knowledge, attitude to and practice of tobacco use do not seem to have received adequate research attention. This cannot be less true about the students in tertiary institutions in Kogi State. Finding out these, certainly, will represent a positive step forward in the effort to prevent adolescents from taking the habit of tobacco use. To this end, one is then inclined to ask, what is the level of knowledge of students regarding tobacco use? What is the attitude of students toward tobacco use? And what is the practice of tobacco use? The above in essence represent the reason for this study.

Statement of the Problem

From earliest time, man had sought for substances that would not only sustain and protect him but would also act on his mind to produce various effects. Tobacco is one of such substances. Equally, individuals when faced with certain health problems usually resort to measures calculated at helping them to solve the problems. This is because life is very precious regardless of age or status. Life should be preserved, maintained and promoted. Consequent upon this, people adopt certain measures or strategies for achieving these goals. One of these strategies is tobacco use.

Ideally, medications are used for preventive, diagnostic, curative and therapeutic purposes and physicians are expected to prescribe drugs. Unfortunately, people including students in tertiary institutions who engage in tobacco use do so without medical advice, and most time the reasons for their use are more psychological and social, and rarely for medicinal values. The effects are often manifested in the feeling which smokers have, namely reduction of boredom and fatigue, enhancement of pleasure of moment and in some instances, smoking provides an escape from the realities of existence. All such use of tobacco to satisfy psychological or personal needs also carry with them a high price such as dependency due to addictive effects of nicotine, and the predisposition to serious, and sometimes fatal disease and untimely death.

Studies conducted on tobacco use knowledge, attitude and practice among students in tertiary institutions in many parts of the world including Nigeria indicate that

tobacco use now constitute a problem. The quest for tobacco products seems to be on the increase and it would likely reach an alarming proportion in Nigeria because people now turn to these chemical substances as means to cope with social and personal problems. Umeh (1991) reported that hospital statistics have it that the population involved in tobacco use cuts across socio-economic levels as both the poor and the rich, illiterate and literate get involved and that students in tertiary institutions are most likely to be involved in tobacco use.

Most of the earlier studies on tobacco use, knowledge, attitude and practice among students in tertiary institutions were carried out in other parts of the world and some parts of this country other than Kogi State. Therefore, this present study sought to determine tobacco use knowledge, attitude and practice among students in tertiary institutions in the State.

Purpose of the Study

The purpose of this study was to determine tobacco use knowledge, attitude and practice among students in tertiary institutions in Kogi State, Nigeria. Specifically, the study seeks to determine;

1. level of knowledge possessed by students in tertiary institution regarding tobacco use in Kogi State;
2. attitude of students in tertiary institutions towards tobacco use in Kogi State;
3. practice of tobacco use by students in tertiary institutions in Kogi State;
4. level of knowledge possessed by students in tertiary institutions regarding tobacco use according to age;
5. level of knowledge possessed by students in tertiary institutions regarding tobacco use according to gender;
6. attitude of students in tertiary institutions towards tobacco use according to age;
7. attitude of students in tertiary institutions towards tobacco use according to gender;
8. practice of tobacco use by students in tertiary institutions according to age;

9. practice of tobacco use by students in tertiary institutions according to gender.

Research Questions

The following research questions have been posed to guide the study.

1. What is the level of knowledge possessed by students in tertiary institutions regarding tobacco use?
2. What is the attitude of the students in tertiary institutions towards tobacco use?
3. What is the practice of tobacco use by students in tertiary institutions?
4. What is the level of knowledge possessed by students in tertiary institutions regarding tobacco use according to age?
5. What is the level of knowledge possessed by students in tertiary institutions regarding tobacco use according to gender?
6. What is the attitude of students in tertiary institutions towards tobacco use according to age?
7. What is the attitude of students in tertiary institutions towards tobacco use according to gender?
8. What is the practice of tobacco use of students in tertiary institutions according to age?
9. What is the practice of tobacco use of students in tertiary institutions according to gender?

Hypotheses

The following null hypotheses were postulated and tested at. 05 level of significance:

1. There is no significance difference in level of knowledge possessed by male and female students in tertiary institutions regarding tobacco use.
2. There is no significant difference in the knowledge possessed by the students in tertiary institutions regarding tobacco use according to age

3. There is no significant difference in tobacco use attitude of the students in tertiary institutions according to gender
4. There is no significant difference in tobacco use attitude of the students according to age.
5. There is no significant difference in tobacco use practice of the students in tertiary institutions according to gender.
6. There is no significant difference in tobacco use practice according to age.

Significance of the Study

The findings from the study may be of immense value and benefit to students in tertiary institutions in particular and the wider public in general. Specifically, the data that was generated to determine the level of tobacco use knowledge among students showed that the students had possessed very high level of knowledge regarding tobacco use. This data may be beneficial to students in Kogi State and those of elsewhere since their knowledge was very high it will help them to know the effects of tobacco in the body and so reduce the number of students who use tobacco.

The information that this study also provides on attitudes of students towards tobacco use indicates that the students had negative attitude towards tobacco use. This information may help the students, health educators and school authorities to know the tobacco education needs of the students as well as help them design learning experiences on how to avoid its use.

Data was generated on the practice of tobacco use among the students. The data revealed that majority of the students had practiced tobacco use. This data may be useful to the health educators, parents and other agencies to determine areas to lay emphasis while carrying out tobacco education programme.

Furthermore, the findings on the level of knowledge possessed by students regarding tobacco use according to age showed that all age groups had very high knowledge of tobacco use. This data may help health workers and researchers to better understand tobacco use practice and aid in the development of more effective tobacco education intervention programming, which could lead to reducing or preventing tobacco use among adolescents.

Also the information regarding tobacco use knowledge according to gender indicated that male and female students had very high level of knowledge. This data will assist health personnel in determining tobacco use knowledge and seek intervention programme.

Data was generated on attitude of students towards tobacco use according to age. The finding showed that all students in various age groups had negative attitude towards tobacco use. This information will assist health workers to identify and design

intervention programme towards young adults in order to prevent them from taking up the habit early enough.

The finding on the attitude of students towards tobacco use according to gender indicated that male and female students had negative attitude towards tobacco use. This information may be useful to health educators in design and implementation of public health interventions aimed to prevent studentsô tobacco use in particular and overall health promotion among adolescent population group.

This study also generated data on tobacco use practice according to age. The finding showed that all age groups of students had practiced tobacco use. This information may benefit all who are concerned about welfare and education of young people as it may enable them to find ways to prevent them from taking up this habit of tobacco use.

Finally, the finding on the tobacco use practice according to gender indicated, male and female students had practiced tobacco use. The information will be of immense benefit to parents, health educators and school authorities in prevention and reduction in tobacco use among the students.

Scope of the Study

The study was carried out in Kogi State, Nigeria. The study covered four tertiary institutions in the State. The institutions include: Kogi State Polytechnic, Lokoja, Kogi State College of Education, Ankpa, Kogi State University, Ayangba, and School of Health Technology, Idah. The socio-demographic factors of gender and age were also examined in the study. This study was concerned with determining tobacco use knowledge, attitude and practice (KAP), among students in tertiary institutions in Kogi State, Nigeria. The aspect of tobacco use that this study investigated includes, cigarette smoking, chewing tobacco and snuffing.

CHPATER TWO

Review of Related Literature

This chapter presents the review of related literature on tobacco use knowledge, attitude and practice among students in tertiary institutions. Most of the related literature in the study describes the situation of other countries with a few on Nigerian situations. The available literatures are hereby presented under the following sub-headings:

1. Conceptual Framework
    - Tobacco and tobacco use
    - Constituents of tobacco
    - Reasons for tobacco use
    - Harmful effects of tobacco in the body
    - Knowledge, attitude and practice
    - Socio-demographic factors associated with knowledge, attitude and practice
    - Measurement of knowledge, attitude and practice
    - Schematic representation of conceptual framework.
2. Theoretical Framework
    - Social Learning Theory (SLT)
    - Theory of Reasoned Action (TRA)
    - Planned Behaviour Theory (PBT)
    - Self-efficacy Theory (SET).
    - Schematic representation of theoretical framework
3. Empirical Studies on Tobacco Use Knowledge, Attitude and Practice.
4. Summary of Literature Review

Conceptual Framework

This section examines the concept of tobacco and tobacco use, constituents of tobacco, reasons for tobacco use, harmful effects of tobacco in the body and tobacco use knowledge, attitude and practice.

Tobacco and tobacco use.

According to Ewuzie (2005) tobacco is a herb which has been smoked, chewed, and or sniffed for more than five hundred years. The author further stated that tobacco plant belongs to the Nicothiniana genus. It can be consumed, used as an organic pesticide and in the form of nicotine tartrate, used in some medicine. Tobacco is a nervous system stimulant that triggers complex biochemical and neurotransmitter disruptions (Basic Facts about Drugs 2010). It elevates heart rate and blood pressure, constricts vessels, irritates lung tissue, and diminishes oneôs ability to taste and smell. Basic Facts about Drugs (2010) also stated that tobacco is a plant that comes in two varieties, nicotiana tabaccum and nicotiana rustica. The latter is the most cultivated of the two and the source of the entire tobacco produced world over including Nigeria.

Tobacco use is the consumption of tobacco products generally. Mackay and Eriksen (2002) defined tobacco use as the consumption of tobacco products by burning, chewing, inhalation, sniffing and sucking. In this present study, tobacco use means any purpose to which tobacco is taken into the body by the students in tertiary institutions or the use of any tobacco products by the students.

Mackay and Eriksen (2002) identified the following types of tobacco use; manufactured cigarettes- consist of shredded or reconstituted tobacco processed with hundreds of chemicals. Often with a filter, they are manufactured by a machine and are the predominant form of tobacco used worldwide. Bidis consists of small amount of tobacco, hand wrapped in dried temburni leaf and tied with string. Despite their small size, their tar and carbon monoxide deliveries can be higher than manufactured cigarettes because of the need to puff harder to keep bidis lit.

Cigars are made of air-cured and fermented tobacco with a tobacco wrapper, and come in many shapes and sizes, from cigarette sized cigarillos, double coronas, cheroots, stupen, chuttas and dhumatis. In reverse chutta and dhumatis smoking, the ignited end of the cigar is placed inside the mouth. Kreteks-are clove-flavoured cigarettes. They contain a wide range of exotic flavourings and eugenol, which has an anaesthetizing effect, allowing for deeper smoke inhalation. Pipes- are made of briar, slate, clay or other substance, tobacco is placed in the bowl and inhaled through the stem, sometimes

through water. Sticks- are made from sun-cured tobacco known as brus and wrapped in cigarette paper.

Mackay and Eriksen (2002) opined that chewing tobacco is also known as plug, loose-leaf, and twist. Panmasal, or betel quid consists of tobacco, areca nuts and staked lime wrapped in betel leaf. They can also contain other sweetening and flavouring agents. Varieties of pan include kaddipudi, hogesoppu, gundi, kadapam, zarda, pattiwala, kiwam, mishri and pills.

Moist snuff is taken orally. A small amount of group tobacco is held in the mouth between the check and gum. Increasingly manufacturers are pre-packaging moist snuff into small paper or cloth packets, to make the product easier to use. Other products include khaini, shammaah and nass or naswa. Dry snuff is powdered tobacco that is inhaled through the nose or taken by mouth. Once widespread, its use is now in decline (Mackay & Eriksen, 2002).

Constituents of tobacco.

Ewuzie (2005) opined that cigarettes contain about 4,000 different chemicals, many of which are harmful to the body. The three most well-known ones are: **Nicotine** which is the addictive substance in tobacco smoke. It reaches the brain within 20 seconds and creates a dependency so that smokers become addicted; **carbon monoxide** combines with the haemoglobin in red blood cell and so reduces the ability of the blood to carry oxygen. This puts extra strain on the circulatory system, and can cause an increased risk of heart disease and strokes; **carcinogens** are substances that cause cancer. Tobacco smoke contains many carcinogens, including tar.

Reasons for tobacco use.

For every one who smokes, there must be a reason for it. These reasons are either consciously expressed or results from initiation, or just a feeling. Ewuzie (2005) suggested the following reasons: stress, advertising, curing of the tooth ache, peer influence, and, traditional longer use of snuff.

Stress is the body's response to physical or mental demand on the body. Many young people start using tobacco as a way of coping with stress or uncomfortable feelings

such as depression, anger, frustration, boredom, anxiety and nervousness. For example, people who are nervous or shy in social situations may begin smoking because it gives them something to do with their hands.

Social pressures: people often start using tobacco to be like someone they admire such as a friend, a parent, or a famous person. Many young people view tobacco use as the sign of adulthood. They think that using tobacco will make them appear sophisticated or in control in social situations. Teachers, parents and other adult role models use tobacco, it may seem natural for teenagers to try tobacco product. On the other hand, some children of non-smokers try to show their independence by smoking. Most young people start to use tobacco when it is offered to them by their friends. Peer pressure is a very strong force. If your friends use tobacco, refusing to try it may be difficult. Many young people know the dangers of tobacco but think they will be protected. They also under estimate the power of tobacco addiction and think they can give it up anytime they want.

Advertising, in an effort to gain new customers, tobacco companies target some advertisements towards young people. In the early 1990s, for example, one company began using a sophisticated looking animal cartoon character to promote smoking as a "smooth" thing to do. A study abound (Ewuzie 2005) that young children recognized this character as easily as they recognized Mickey Mouse. Thousands of parents and other adults voiced their outrage. The company denied they were targeting their advertisements toward youngsters and continued using the character. Whatever the age of the target audiences, tobacco advertisements always show users as healthy, happy, and attractive people. These images imply that if you use tobacco, you will be like those people-slim, calm, mature, glamorous, sophisticated, rugged, independent, or tough. The advertisements do not show coughing smokers with discoloured teeth, prematurely wrinkled skin and stained fingers. They do not show tobacco shewers spitting and dribbling tobacco juice. They do not show long time smokers who suffer from lung diseases having to breathe oxygen through a nasal tube, while they do ordinary activities. In fact, tobacco companies deny that there is a direct connection between tobacco use and poor health.

Ewuzie (2005) also stated that the reason why many people in Nigeria use smokeless tobacco is the perception that snuff cures tooth infection, can be used to stop nausea and acts as a stimulant. Other factors according to the author include peer influence and loneliness. Furthermore the author mentioned that snuff is more acceptable than cigarette-smoking because of its traditionally longer in use and the belief that its side effect is less than that of tobacco smoking.

Harmful effects of tobacco in the body.

Tobacco is known to be lethal, but its use is legal in every country of the world. Obviously not everyone smokes, yet tobacco remains the most commonly used and widely distributed drug in existence today. Corey (1990) stated that scientific information on the harmful effects of tobacco began to appear around 1920, but it was not until the 1950s that an alarm was raised. According to the author, evidence that has accumulated since then proves beyond doubt that exposure to the burning of tobacco is linked to greater probability of death, disease disability, loss of productivity and impaired quality of life. WHO (2008), categorically lists the risks: smoking is now known to be associated with cancers of the lung, the mouth, the larynx, the trachea and bronchia, the oesophaegus, the pancreas, the kidney, and the bladder, as well as heart disease, cerebrovascular and peripheral vascular disease, chronic bronchitis, and emphysema. The organization stated further that in pregnant women who smoke there is an increased probability of miscarriage, foetal and neonatal death, premature birth, and low birth weight. According to the organization, in parts of the world where nutritional and health standard are poor the negative effects of smoking are aggravated. Even those who don't smoke but live or work in the proximity of smokers (so-called passive smokers) are now known to be exposed to important health risks.

Mackay and Eriksen (2002) reported that tobacco is packed with harmful and addictive substances. Scientific evidence has shown conclusively that all forms of tobacco cause health problems throughout life, frequently resulting in death or disability. The authors further stated that smokers have marked increased risks of multiple cancers, particularly lung cancer, and are at far greater risk of heart disease, strokes, emphysema

and many other fatal and non-fatal diseases. If they chew tobacco, they risk cancer of the lip, tongue and mouth.

According to Ewuzie (2005) tobacco smoke contains more than 4,000 chemicals Many of these chemicals are toxic. In fact, greater numbers of chemicals, in smokeless tobacco have been identified by scientists as known carcinogens. Carcinogens are substances that cause cancer. These effects include: increased heart rate, blood pressure and the amount of carbon dioxide in the body. Other possible effects which individuals are likely to suffer are eye and nose irritation, cough, nausea, and dizziness. These effects including the physical discomforts suffered by non- smokers, make smoking in an environment shared by non-smokers an act of aggression.

The author asserted that smokers in general are not as healthy as nonsmokers. The author also stated that smoking damages the body systems that protect a person from disease. Furthermore, smoking also triggers allergies and may lead to inflammation and swelling of sinuses. Smokers suffer from the common cold more often than non-smokers. Smokers colds are often more serious than those of non-smokers. Smokers are also more likely to get infectious lung diseases such as influenza and pneumonia, so continued the report.

Other health problems caused by tobacco use are non-cancerous diseases that affect the gums and teeth, smoking and smokeless tobacco use contribute to tooth loss, gum disease, and delayed healing after dental surgery. Smoking, chewing and dipping stain the teeth and give the user chronic bad breath. Chewing tobacco contains grit that wears away the surfaces of the teeth (Ewuzie, 2005).

According to Bedworth and Delia (1983), smokers generally, tend to look frail and perform physical work more slowly than non-smokers, although there are exceptions because of individual body constitution. Smoking also leads to discolouration of the teeth (due to nicotine, and most especially tar deposit), black lips, foul body odour, bad breath, hoarse voice and eye and nose irritation, the former of which may result in conjunctivitis. The authors also reported that smoking impairs the skin function resulting in reduced blood in circulation and therefore impairment of oxygen supply to skin surface. This makes the skin to wrinkle and age prematurely.

Knowledge, attitude and practice.

Omeregbe (1998), defined knowledge as the fact of understanding relevant, issue or objects that are acquired either through learning or experience. The author further explained that knowledge comes about as a result of learning via cognitive, affective and psycho-motor domains, that knowledge can be justified as the most important outcome of learning. Learning which results in knowledge can be formal as in the case where students are taught in classroom about tobacco use or informal as in a situation where students get information concerning tobacco use from their parents, friend, print and electronic media.

Bedworth and Bedworth (2008) revealed that knowledge implies an understanding of specific facts, terminologies, convention, ways and means of dealing with specific trends, sequences, classifications and categories, methodology, criteria, universal and abstract principles and generalizations and finally theories and structures. When applied to tobacco use knowledge, attitude and practice as in the present study, it means an understanding of the meaning of various types of tobacco use and harmful effects of tobacco products in the body by the college students. Hornby (2009) defined knowledge as the information, understanding and skills that you gain through education or experience.

WHO (2006), opined that knowledge is a pre-requisite to any attitude and practice. The organization maintains that, many of the ailments suffered are not to a large extent inflicted by anti-health practice because many people are not well informed. This means that, afflictions by people come from lack of adequate or correct knowledge. Okafor (1997) stated that knowledge is a precursor for behaviour though not all knowledge is translated into behaviour.

Attitude does not have a universally acceptable definition. Anderson (2000), defined attitude as a moderately intense emotion that prepares or predisposes individuals to respond consistently in a favourable or unfavourable manner when confronted with one's feeling with a particular object. Similarly, Meyers (1996) stated that attitude is a favourable or unfavourable evaluative reaction towards something or somebody exhibited in one's belief, feelings or intended actions. The author went further to disclose that attitudes are learnt through environment by the genes. Also Moghaddam (1998) refers to

attitude as the evaluation of other people's events, issues and material things with degrees of favour or disfavour.

Hovland (1980) defined attitude as a hypothetical construct that cannot be observed which may be an overt manifestation of an underlying behaviour. Furthermore, the author mentioned that one cannot directly observe an attitude but can make an inference about it from verbal expressions and other overt behaviours. According to Katz (1981), attitude is an individual's tendency or predisposition to evaluate an object or the symbol of that object in a certain way or manner. The author explained further that individuals have abilities to make predictions about one's or other people's behaviour through some bits of evidence from the people past experience.

Allport (1985) asserted that there is a general agreement that a person's attitude towards some objects constitute a predisposition on his part to respond to the object in consistency favourable and unfavourable manner. Osareren (1996) opined that attitude is a mental and neural state of readiness organized through experience, exerting a directive or dynamic influence upon the individual's responses to all objects and situations to which it is related. Attitude in the content of the present study is the feelings that predispose college students towards tobacco use.

Practice refers to measures or actions adopted or taken in doing a thing. Hornby (2009) refers to practice as a way of doing something regularly, a habit or custom. According to Brainy (2009), practice means the way to execute or to do something. Within the context of this study, practice refers to the way or action adopted by students in tertiary institutions towards tobacco use. It is an action that has become part and parcel of an individual. An individual is capable of doing or repeating the action anytime. The action may be correct or incorrect, recommended or not recommended. For example, a person who regularly visits the hospital for routine checkup or medical treatment has performed a correct health practice. It is correct because this action will be beneficial to his health. On the contrary, a person who smokes five to ten sticks of cigarettes everyday has also performed an action. This is an incorrect practice because his action is likely to be detrimental to his health and may also affect other members of the society.

Socio-demographic factors associated with tobacco use knowledge, attitude and practice.

Demographic factors, such as gender, age, smoking status of parents, siblings, friends and teachers and knowledge of adverse effects of smoking, may be capable of impacting or influencing health behaviours (Spear & Kulbok 2001). Gender is a variable that has received consistent attention among researchers (Jones, Schroeder & Mooichan et al, 2004), According to Boehm (1993), females are likely than males to practice protective health behaviours, whereas male gender is a significant predictor of smoking initiation among adolescents (Bush, 1993, Gilpin, 1994). Studies have revealed that women who engaged in certain risk behaviours at early age may be more vulnerable to certain illnesses or health outcomes than men who partake in similar behaviours during early adolescence (Brandy & Randall, 1999 Nolen-Hoeksema & Hilt, 2006).

With respect to tobacco consumption, it has been suggested that females may be at greater risk than males of developing respiratory health problems and susceptibility to lung cancer later in life as a result of the fact that smoking affects airway development during childhood (Risch, Howe, Jain, Burch, Holowaty & Miller, 1993, Gold, Wang, Wypji, Speizer, Wave & Duckery, 1996). Smoking behaviour of women differs from that of men; women also are more highly motivated to smoke than men (Mackay et al, 2002).

Reports from researches have indicated that age has significant influence on knowledge, attitude and practice regarding tobacco use. According to U.S. Department of Human Health Services (1991), youth age 12-17 who smoke are more than 11 times likely to use illicit drugs and 16 times likely to drink heavily than youths who do not smoke. A report by Center on Addiction and Substance Abuse (CASA, 2002), stated that the earlier a person used tobacco, the more likely he or she is to become a regular drug user as an adult. And that, people who start smoking as children are almost four times more likely to be regular users of an illicit drug and three times likely to use cocaine regularly than those who do not smoke as children. Anthony (1997), mentioned that over 75 per cent of adult smokers reported that their first smoking experience began during adolescence.

Few individuals initiate smoking after 20 years of age; most smokers take up smoking during adolescence. The proportion of smokers increases heavily during 13-15

years of age, especially daily smokers (Mc-Neil, Jarvis, Stapleton, Russel, Esser, Gammage & Gray, 1988 and Stanton, Silva & Oei, 1989). By the age of 15 years, 80 per cent of adolescents had at least tried smoking (Stanton et al, 1989).

Smoking status of students and their parents, siblings and peer group is another important determinant of tobacco use imitation among college students. Kobus (2003) has reported that adolescents with parents, siblings and friends who smoke are likely to initiate smoking than those with parents, siblings and friends who are not smokers. Some studies have shown that the strongest predictors of smoking are previous smoking (Pederson & Fefoce, 1987; Mc-Neil et al, 1988; Chassin & Preson, 1990). The association between adolescents and their friends' smoking is usually quite strong (Reimers, Pornrebn, Becker & Lauer, 1990; Comrad, Flay & Hill, 1992). Stanton and Silva (1992), found that the source of influence is more important than the extent of influence among friends and family members. The present study only considered age and gender.

Measurement of knowledge, attitude and practice of tobacco use.

Measurement refers to the assignment of mathematic symbols to objects or events according to rules (Achor & Ejigbo 2010). Such numerals are 0, 1, 2, and 3; although the numerals have no relevance to measurement until quantitative meaning is assigned to it. Measurement is conducted using instruments, like a range, a scale or a test (Achor & Ejigbo 2010).The authors further explained that any instrument capable of providing dependable measurement must possess certain qualities like validity, reliability and usability.

Knowledge sometimes is based on experiences, logic or causality (Andrews, 2007). It is used to determine how much is known about a topic, for example, knowledge regarding the harmful effects of tobacco in the body systems. Knowledge measurement is necessary in education as well as scientific world. Knowledge testing in the world of education has been that requiring facts can only be useful if the facts can be explained or used for the good of man (Andrews, 2007). According to the author, there are five types of tests that can be used to measure knowledge. These are essay tests, short and completion test, structured response tests, true-false tests and multiple tests.

Essay test gives the students opportunity to respond to the question in his or her words, provided the questions asked are clear and precise. This implies that students must possess writing skills and must have ability to understand the questions. Structural-response tests require the students to choose among already prepared alternative answers to questions. These are usually termed 'objectives' although at best only scoring procedures are objectives. The most commonly used objectively scored tests are the true-false test, the multiple choice tests, and the matching item tests (Andrews, 2007).

The true-false item is simply a statement that the student is to read and judge one way or the other. It could be described as a two-response multiple-choice item although the opposing alternative is unstated (that the statement is true). Such an item may be written in a slightly different form so that the correct answer is either 'yes' or 'no' or 'right' or 'wrong'. Another variation is to require the student to say why an item he says is false is so, or to correct an item judged false.

Multiple-choice question consists of a posed idea or problem called the stem and not less than four or five responses or detractors from which the student is to choose one correct or best answer. The stem may be written either as a statement or as a question. The matching-item test is really a variation of the multiple-choice test. In this case, for each item in a list of terms, topics or other elements, a choice is made from another list of words that describe, define or somehow relate to the items in the first list usually a list of terms is placed to the left and list of alternatives to the right (Andrews, 2007).

Ashur (1977) developed four scales for measuring level of knowledge of an individual. According to the scales, a proportion of less than 40 per cent is considered 'low' level of knowledge. 40-59 per cent 'average' knowledge, 60-80 per cent 'high' level and above 80 per cent Very high1 level of knowledge. Okafor (1997) used a modified version of Ashur (1977) principle. A knowledge score of less than 20 per cent is considered Very low level', a score which is between 21-39 per cent is labeled 'low' level while a score of 40-59 per cent is considered moderate level. A score of 60-69 per cent is considered high level knowledge. A score that is above 80 per cent is considered Very high' level knowledge. In this present study level of knowledge of students regarding various types of tobacco use and harmful effects tobacco use will be considered.

Measurement of attitude in health education is always very difficult because attitude is concerned with one's feelings toward an object, person or thing (Okafor, 1997). Enyi (2006) opined that measurement of attitude is usually based on the subjected self-reports. According to the author, the instrument used to measure attitude is always referred to as attitude scale. Osuala (2005) and Enyi (2006) collaborated that the Likert scale is commonly used for the measurement of attitude, which enables the researcher to rank attitude.

The scale presents a number of positive and negative statements for each attitude being rated. The responses to the statement are assigned numerical values as shown below: Strongly agree (5) Agree (4) Undecided (3) Disagree (2) and strongly Disagree (1). Nworgu (2006) asserted that the statement formed should be sure that half are positive and the other half are negative, and be placed in alternated positions. The author stated further that the score should be in such a way that a higher value indicates more positive responses or attitude for example, Strongly Agree (SA) 5, Agree (A) 4, Undecided (U) 3, Disagree (D) 2, and Strongly Disagree (SD) A, while for negative items, the weighting is reversed as Strongly Agree (1), Agree (2), ^undecided (3), Disagree (4), and Strongly Disagree (5).

The Likert attitude measurement scale was modified by Osuala (2005), Enyi (2006) and Nworgu (2006) on a four point scale as (i) Strongly Agree (SA) 4, (ii) Agree (A) 3, (iii) Disagree (D) 2 and strongly Disagree (SD) 1, on the positive side. On the negative, it is (i) Strongly Agree (SA) 1, (ii) Agree (A) 2, (iii) Disagree (D) 3, and Strongly Disagree (SD) 4 regarding tobacco use practice of the college students in Kogi State, the response like ñyesò to a practices that has taken place or ñNoò to a practice or action or behariour that the individual does not adopt will be used (Efegbesan, 2008). This ñYesò or ñNoò scale as emphasized by Efegbesan (2008) will therefore be used to measure the practice of tobacco use among college students in Kogi State. This modified attitude measurement scale by Osuala (2005), Enyi (2006), and Nworgu (2006) was used to measure studentsô attitude towards tobacco use in Kogi State, Nigeria.

CONCEPTUAL FRAMEWORK

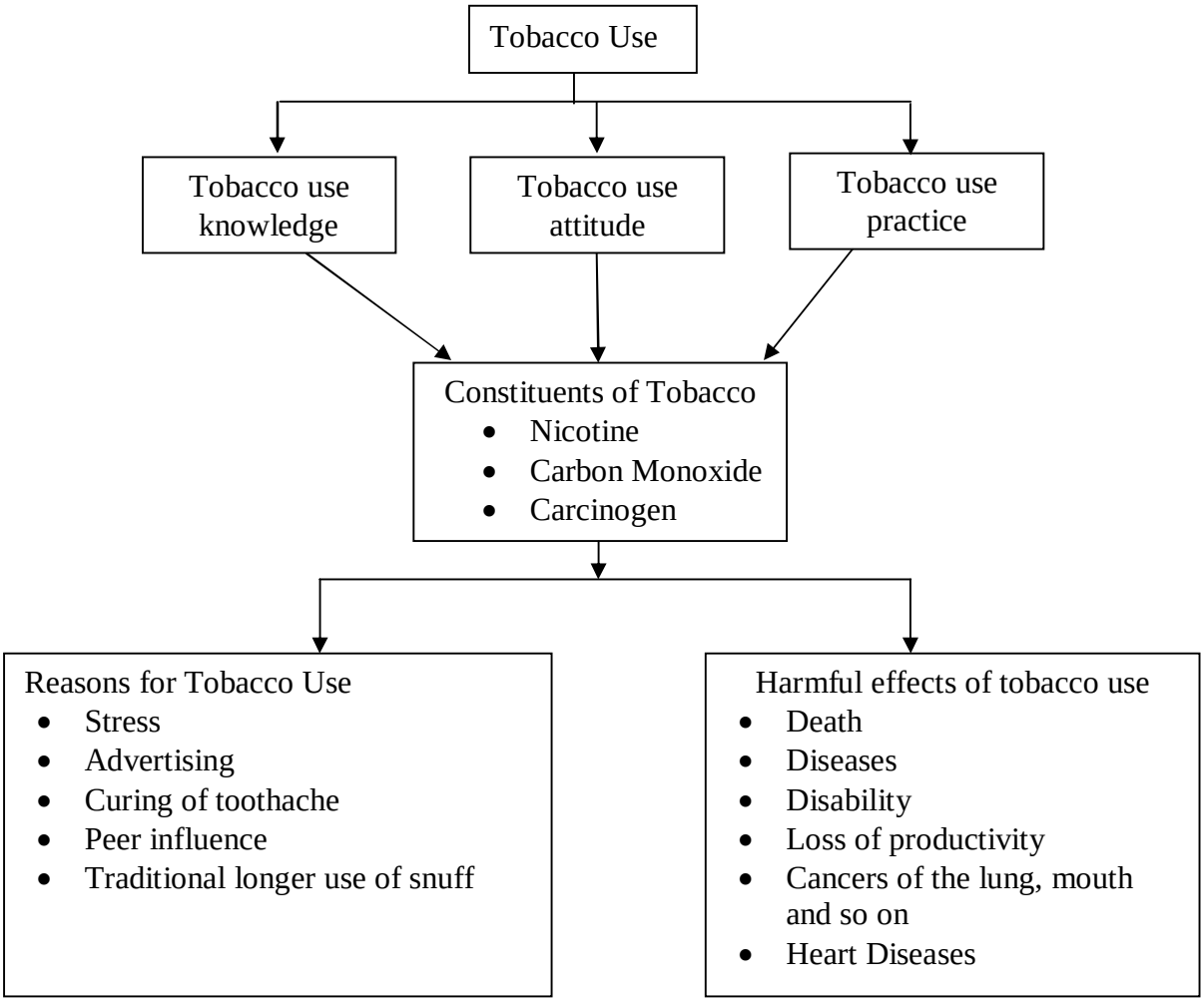

Figure 1: Schematic representation of the conceptual framework

Tobacco use knowledge, attitude and practice of the students are being influenced by physiological, psychological and social factors.

Theoretical Framework

Theories are constructs or postulations that guide or suggest ways in which individuals perceive phenomena and act or behave which in turn may influence the nature and level of what they know or practice. Babbie (2003), defined theory as a systematic explanation for the observations that relate to a particular aspect of life, According to

Debarr (2004), theories play an essential role in Health Education. Theories and models are among health educators most useful tools as they tackle health challenges.

Many theories in health education and health promotion seek answers to the fundamental question of why people behave the way they do. More specifically theories are used to try to understand and predict how and why people change their unhealthy behaviours to healthier ones. The purpose of this section therefore was to review theories that are related to this study. These include, Social Learning Theory (SLT), The Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), and Self-efficiency Theory (SET).

Social learning theory.

One theory which applies to the present study is the social learning theory (SLT) as propounded by Bandura (1986). This theory states that one learns social behaivour by observing and imitating, and by being rewarded or punished. This theory places emphasis on the importance of observing and modeling behaviour, attitude and emotional reactions of others. Bandura (1986) believes that learning will be exceedingly difficult if one is allowed to rely solely on the effects of his own action than on what to do. Implicit in this theory is the fact that learning is a social process. Individuals have to socialize with others or groups of people in order to know something or to gain experience and training. The social group could be a family (father, mother and siblings), church or college (comprising a group of teachers, as well as students). The tenet of this theory is that the learner is a member of a social group and within this group the child continues to learn through identification, imitation and modeling. The learner is expected to give regards to the approval and disapproval of the group.

This theory applies to the present study because socializing agents such as family and tertiary institutions and significant others (as in this case teachers, parents, brothers, sister, peer, groups.) have vital roles to play in the tobacco use knowledge, attitude and practice college students. Students in tertiary institutions, particularly learn by observation, imitation and modeling as implicated in the theory. Social learning theory gives considerable recognition to the fact that, adolescents and youth (college students) gain understating, beliefs and practice directly by education and indirectly by observing

the behaviours of others. In addition, the theory addresses the societal pressures on adolescents and youth and the importance of helping youths understand and resist these pressures. Social learning theory, Bandura (1986), holds that learning is shaped by the observed positive and negative consequences of behaviour - one's own or somebody else's. That people can learn to anticipate consequences and so serve as their change agents. Furthermore, the author emphasized that, this capacity to learn must await certain mile stones in the cognitive domain before it can come to foil power. One of the milestones is knowledge that will bring about a change (outcome) in their behaivour.

The concept of social learning theory is central to understanding behaviour changed as described by Bandura (1986). Efficiency is the perception that one is capable of performing certain behaviour. This implies that one gains confidence through receiving information from others, more importantly by seeing other people of similar background perform the behaviour. Strengthening students' ability to resist tobacco products by saying no1 is a good example of how SLT has been applied to tobacco prevention programme (Warch & Diclement, 2004).

Theory of reasoned action.

This theory was designed to explain not just health behaviours but all rational behaviours. This theory is based on the assumption that most behaviour of social relevance are under rational (control) power. In addition, a person's intention to perform (or not perform) the behaviour is the immediate determinant of that behaviour (Andrews, 2007). This theory is not only designed to predict human behaviour but also to understand it and to explain people's reactions to obnoxious events in order to avert the aversive stimuli.

Many studies have used the TRA and its extension, TPA, as framework not only good for understanding, explaining and predicting behaviours, but also to provide a useful guide for designing intervention strategies to change or maintain behaviours. The theory is based on an assumption that, individual behavioural intentions are directly related to their attitudes (Ajzen & Fishbein, 1980). The behavioural intention, in turn, has two determinants. One is attitudes.towards the behaviour - a person who believes that performing a given behaviour will lead to positive outcomes will hold a favourable attitude towards performing the behaviour. The other is the subjective norm a person who

believes that most referents with whom he/she is motivated to comply thinks he/she should perform the behaviour will perceive the social pressure to do so. The beliefs that underlie a person's attitude toward the behaviour are termed normative beliefs (Ajzen & Fishbein, 1980).

This theory applies to the present study thus; if a person plans to behave in a certain way, for instance smoke cigarette as he/she has seen others do and his attitude towards that behaviour is that the behaviour might lead him/her into bad health condition (such as rape, violence or ill health) which is a negative outcomes, then he or she may decide not to perform that action. On the other hand, if he or she is convinced that performing the behaviour will lead to a positive outcome (such as making him or her, a hero so to say or healthy and then he or she may decide to perform the behaviour. If a person plans to act in a certain way (smoke cigarette or sniff snuff or chew tobacco) and he or she believes that certain individuals or group of individuals (church) group thinks he or she should not smoke or not use tobacco, then that group's pressure (in this case the church) will increase the more and he or she will be motivated to comply with the group's dictate. This implies that, for a particular practice to occur or not occur, the individual concerned must be inherently involved in its choice. It also means that, in using any tobacco product, the individual also considers the society's disposition to it. If he or she is convinced that, the society's approval will bring about positive outcome, then he or she will go ahead to practice it. If on the other hand, he/she is convinced that the society's disapproval will result in negative outcome, then he or she will not use the tobacco product. This theory collaborate the present study in several ways; one way is that the society can affect ones final behaviour regarding tobacco use.

The Theory of Planned Behaviour (TPB).

The Theory of Planned Behaviour (TPB) states that, what an individual does is determined by personal motivation which in turn is determined by attitude, social support and perceived behavioural control (Ajzen & Driver, 1992). The authors stated further that these factors are grounded by the person's perception of social, personal and situational consequences of the specified action, TPB allows for a better evaluation of human behaviour when participation decisions are voluntary and under an individual's control.

The theory of planned behaviour has been widely used in environmental behavioural research to predict person1 intent to participate in a specified behaviour (Gamba & Oskamp, 1994; Scott & Willets, 1994; Kuhlemier, Vanden Berg & Largerweiji, 1999, Grodzinska-Jukczak, Agata & Agata, 2003). TPB has been used successfully, empirically and conceptually by many researchers in environmental behaviour to explore attitudes that trace the correlation of beliefs to the behaviour.

This theory applies to the present study thus: Generally speaking, actions that are environmentally friendly carry a positive normative belief. That is to say, sustainable behaviours are widely promoted as positive behaviours. However, although there may be a behavioural intention to practice such behaviours, (in this case, tobacco use), perceived behavioral control can be hindered by constraints such as a belief that oneôs behaviour will not have any impact (Peer & McClendon, 2002, and Robert,2002).

TPB was used to analyze the attitude of students to tobacco use in Kogi State. It then follows that if students get to know about the harmful effects of tobacco to their health and that of their loved ones, they would likely to develop negative attitude towards tobacco us.

Self-efficacy theory (SET).

Self-efficacy is well known to influence health behaviour (Von Ah, Ebert, Ngamvitro, Park, & Kang, 2004). Bandura's theory of Self-efficacy (1977) suggests that behaviour is best predicted by individual's confidence in their ability to accomplish (practice) a given task. Self-efficacy may impact health promoting behaviours, cessation of unhealthy behaviours, and or the maintenance of behavioural changes when faced with difficult situations (Maddux, Brawley & Boylin, 1995).

Kear (2002) found that self-efficacy to resist cigarette smoking was a significant determinant of smoking behaviour. Similarly, Kvis et al (1999) found that increase smoking self-efficacy is an important predictor for quitting smoking among 18-29 year old. Furthermore, the authors opined that the role of self-efficacy on smoking needs to be further examined along with other personality and cognitive factors among college students as in the case of this present study.

Theoretical Framework

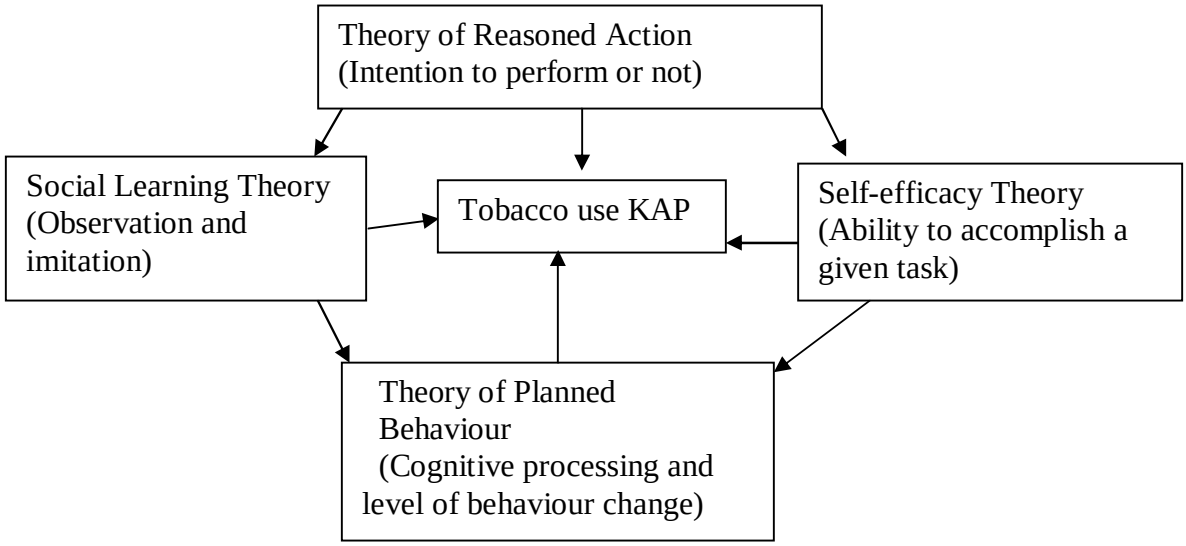

Figure 2: Schematic Representation of Theoretical Frame Work

Inter play of Theory of Reason Action, Social Learning Theory, Self-efficacy Theory and Theory of Planned Behaviour. These theories affect tobacco use KAP of the students.

Empirical Studies on Tobacco Use Knowledge, Attitude and Practice

Quite a number of studies have been conducted on tobacco use knowledge, attitude and practice among college students. The ones that are related to the present study are hereby reviewed and presented below. Adams (1975) conducted a study to determine the students' knowledge and opinion about tobacco and alcohol. The population of the study comprised of all students from seven schools in North Central town, and the sample consisted of 465 students drawn from seven schools in North Central town while the instrument for data collection was the questionnaire which was made up of 35 multiple choice questions. The objective of the study was to determine the studentôs knowledge and opinion about tobacco and alcohol. Data was analyzed using t-Test statistics. The design was descriptive survey research. The findings revealed that 41 per cent of the respondents gave current responses to the questions on alcohol and 59 per cent supplied wrong answers. With regards to tobacco, 36 per cent of the sample supplied correct responses 54 per cent gave wrong answers, while 10 per cent made no response.

The findings of this study indicated apparent generally low level of knowledge among secondary school students regarding alcohol and tobacco.

Chen and Thompson (1980) conducted a study on the smoking behaviour and smoking education. The population of the study comprised of all students from three Massachusettsô public junior high schools. Cross sectional survey design was used. The sample consisted of 414 male and female 9th grade students from three Massachusetts' public junior high schools. The purpose of the study was to investigate studentôs smokers and non-smokers regarding the knowledge of the harmful effects of smoking. The instrument used for the study was questionnaire and the method of data analysis was frequency and percentage. The study revealed that non-smokers were more knowledgeable about the harmful effects of smoking on health than smokers. The findings is contrary to those of Okafor (1997) and Ewuzie (2005) which showed negative relationship between knowledge and behaviours and confirmed that although knowledge does not always lead to behaviour change, information is still the foundation from which behaviour change normally results.

Oladipo (1988) conducted a study on the relationship between selected tobacco use knowledge and attitude among public school students in Dallas, TEXAS, U. S. A. The main objective of the study was to determine the relationship between tobacco use knowledge among the students in Dallas Texas. Descriptive survey research was used. The population consisted of all the students of public schools in North Texas. A total of 1,821 students formed the sample. The instrument used for the study was questionnaire while the method of data analyses was frequency and percentage. The design was descriptive survey. The finding showed that, there was a significant negative correlation between tobacco use knowledge and tobacco use. This shows that possession of health facts does not always ensure negative attitudes towards tobacco use.

Paavola, Vartianen and Puska (1996) carried out a survey on predicting adult smoking: the influence of smoking during adolescence and among friends and family in North Karlia, Finland. The objective of the study was to predict smoking from early adolescence to adulthood by using longitudinal data. The study population included all students in the seventh and ninth grades while the sample was 903. Instrument used for the study was questionnaire; and the method of data analysis was logistic regression

analysis. The cross-sectional survey was used, while questionnaire was the instrument for data collection. The finding showed that two-thirds of the smokers in the ninth grade of junior high school (aged 15 years) were still smoking at the age 28. Above half had started after that previous smoking status and smoking by friends were the most important predictors of smoking.

A 2-year health promotion prgramme, the North Karelia Youth Project, began in 1978 among the seventh graders (aged 13) and finished when the same students who reached ninth grade (aged 15) in autumn 1980. It was carried at four schools in North Karelia, Finland. The aim of the project was to prevent cardiovascular risk factors among adolescents. The smoker prevention portion of the programme was aimed at teaching skills to resist the influences that promote smoking.

At every point males smoked more than females. The biggest difference between genders in smoking was more common among females than males at the ages of 15, 16, 17, and 21. There were not big differences in the prevalence of non-smokers between males and females in the first four surveys; however, at the age of 28, 70% of women were non-smokers versus 55% of men.

The prevalence of smoking among adolescents' friends and family members was studied. At the age of 13 years, 12% of the boys and 8% of the girls reported having at least one friend who smoked. By the age of 15 these proportions increased to 28 and 26%, respectively. In 1980, 21% of the adolescents reported having a brother who smoked. In 1980, 39% of the fathers and 14% of mothers answered they had smoked 'yesterday or today': 30% of fathers and 78% of mothers answered they had never smoked.

Salami (1997), conducted a study on patterns of Drug Abuse Among youths in Kwara State, Nigeria. The objective of study was to investigate the patterns of drug abuse among first year students of tertiary institutions in Kwara State, Nigeria. The population for the study consisted of all the first year students of tertiary institutions in kwara State, Nigeria. The sample for the study was 380 subjects. Questionnaire was the instrument used for the study, while method of date analysis was frequencies and percentages. Cross-sectional survey was used.

In the response to the question, have you been taking drugs without the medical personnel prescription? It was found that 360 (94.47%) of the sample had abused drugs while 20 (5.3%) of them had not. The study showed that 77.89% of the students have used analgesics while 74.21% of the students have used antibiotics drugs without the medical personnelôs prescriptions. Beer and wine came third (41.84%) followed by alcohol (31.59%) which came forth, 27.89% of them indulged in cigarette smoking. Hard drugs appeared to be less widely used since less than 18% of the respondents have abused them. The study also revealed that some students were multiple drug users. On the frequency of taking drugs without medical personnelôs prescriptions, 76% of the respondents accepted taking the drugs occasionally 9% took drugs regularly while 15% did not indicate their position. Forty-one per cent of the students denied that they obtained the drugs from hospital clinics, 33.68% from chemist chops, and 20% from patent medicine stores. Regarding the reasons for taking drugs mainly for healing purposes (78>95%), overcoming fatigue and boredom (41. 06%), and as sleep aids (34.74%). Other less important reasons for taking drugs such as desire for new experience, peer group acceptance, overcoming shyness which ranged between 10% and 17% were indicated.

Torabi, Yang and Li (2002) conducted a study on comparison of tobacco use knowledge, attitude and practice among college students in China and the United States. The objective of the study was to compare the knowledge attitude and practice regarding tobacco use of college students. The population for the study comprised all students at a large Midwestern University (American Participants), and all students from a large South-East China University (Chinese Participants). Sample for the study was 2131 subjects. Instrument used for the study was modified existing questionnaire. Method of data analysis used descriptive and inferential statistical tests. The result shows that American students scored higher knowledge but lower in attitude scale of the questionnaire American respondents also were more likely to smoke cigarettes and use other tobacco products. Chinese students on the other land had a higher rate of starting smoking at age 15 years or younger and were less likely to have tried to quit.

The study used one questionnaire in two languages due to the nature of the study population; a Chinese version was used in the US. Both versions of the questionnaire

were developed based on the questionnaire used by the Indiana Prevention Resource centre entitled Alcohol, Tobacco, and other Drug use among Indiana Children and Adolescents survey, and the tobacco use attitude scale developed by Meier (1991). A total of 55 question items were included, among which 9 were demographic, 11 were about tobacco use knowledge, and 18 tobacco use attitudes, and 17 tobacco use behaviours. The knowledge questions were in a multiple choice format, while the attitude scale consisted of five-point Likert type items.

To ensure consistency, student samples in both countries were administered question in their native languages. A total of 2138 respondents (1535 in China, 603 in the US) were surveyed, and 2131 surveys (1534 from China, 597 from the US) were retained for data analysis.

A description of students age of first cigarette use was presented as follows: A greater percentage of Chinese students start smoking prior to age of 13 years compares with their US counterparts (37.6% versus 17.9%, respectively). Then, at an older age, more American students start smoking than Chinese students. These patterns of association are statistically significant ($X2 = 136.3$, $p < 0.0.5$).

The comparisons of experiences quitting smoking between Chinese and American college student were presented as described below: A greater percentage of American students have tried to quit smoking compared with their Chinese counterparts (45.7 versus 23.6%, respectively). The association between quitting smoking and country is statistically significant ($X2 = 113$, $0 p < 0.05$).

The comparisons of mean total knowledge scores between Chinese and American students according to gender show that both male and female American students had higher mean scores on the tobacco knowledge test when compared with their Chinese counterparts (8.32 versus 6.79 and 8.58 versus 7.25, respectively). However, the MANOVA test indicated that there was no significant interaction between gender and country, while there were significant differences in the mean scores between American and Chinese students (8.76 versus 6.84, respectively).

The comparisons of mean total attitude scores related to tobacco use for both groups have shown that male and female Chinese students have higher mean total attitude scores than their American counterparts (64.36 versus 63.73 and 69.49 versus 66.84,

respectively). The MANOVA test showed no significant interaction between gender and country, but the difference of mean scores between Chinese and American students (66.40 versus 65; 66) was significant.

Von Ah, Ebert, Ngamvitroj, Park and Kang (2004) studied factors related to cigarette smoking initiation and use among college students in the U.S. The objective of the study was to examine the impact of personality factors (neuroticism, extraversion, openness, agreeableness, and conscientiousness), cognitive factors (sense of coherence and self-efficacy), and coping resource factors (gender and ethnicity) on cigarette smoking

behaviours (initiation, frequency, and amount of cigarette smoking) among college students. The population for the study comprised of all under graduate students enrolled in introductory Psychology at a southern University in the US. Sample for the study was 161. Logistic regression was used to examine the direct effects of personality factors (neuroticism, extraversion, openness1, agreeableness, and conscientiousness), cognitive factors (sense of coherence and smoking self-efficacy), coping resources (family and friend emotional social support) and demographic variables (gender and ethnicity) on cigarette smoking initiation. The instrument used for the study was questionnaire. Multiple linear regressions were used to determine the contribution of the predictor variable on cigarette smoking frequency and quantity. The study variables were found to have normal distributions and therefore met the assumptions for the analyses used (Hair, 1998). The findings from the study showed that the majority of the students had tried smoking (55%); 42% were current smokers. The majority (77%) who had smoked a whole cigarette did so at age 16 years or younger. Who reported lower levels of consciousness and self-efficacy had a greater like hood to had tried cigarette smoking. Also students who had lower levels of efficacy reported smoking more frequently and greater qualities of cigarettes than students with higher levels of self- efficacy. Self-efficacy was the most significant predicator of smoking behaviours

The majority of 161 participants were females (73%). The mean age was 19.7 (SD = 4.09) years with a range from 18 to 26 years. The sample was distributed between white (44%) and non-white (56%) respondents. The overwhelming majority of participants reported they were single (91%), with 7% divorced. Over half the

participants (88 out of 161 or 55%) reported having ever tried cigarette smoking (had at least one or two puffs), 42% of which were current smokers. The majority of students (77%) who had smoked a whole cigarette did so at 16 years of age or younger. As regards to gender, there was not a significant difference between the number of males and females who had tried smoking, P= 0.60. Twenty five out of the 43 males (58%) and 63 out of 118 females (53%) had tried cigarettes. However, there was a significant difference in the total number of white verses Non-white participants who reported having tried smoking, P = 0.02. Forty-six out of 70 white participants (66%) and 42 out of 90 Non-white participants (47%) had tried smoking cigarettes.

The students reported moderate levels of the personality factors with conscientiousness being slightly higher than the other resistant factors sense of coherence was moderate (125.5 ± 2.42). The levels of family emotional support (58.1 ±38.7) were ranked slightly higher than the levels of friend emotional support (51.5 ± 5.5). Although slightly more males reported having tried cigarette smoking than females, gender was not a significant predictor of cigarette smoking initiation. In regards to ethnicity, individuals identified as non-white were less likely to smoke than their white counterparts, although this trend was not statically significant, P = 0 = 06.

Siziya, Rudatsikira and Muula (2007), conducted a survey on cigarette smoking among school-going Adolescents in Kafue, Zambia. The objective of the study was to estimate the prevalence of current cigarette smoking and associated factors among school-age adolescents in Kafue, Zambia. The population for the study consisted of all school-going adolescents in Kafue, Zambia while the sample was 1872 adolescents. Instrument used for the study was questionnaire and data was analyzed using frequencies and odds ratios. The result showed that 154(82%) adolescents were current cigarette smokers while 93(10.4%) males and 6(6.2%) females were current smokers ($p<0.001$). The majority of the respondents usually smoked at their own home or at a friendôs house. Having friends or parents who are smokers and being exposed to pro-tobacco advertisements at social gatherings were associated with being a current smoker.

Information on smoking status and sex was available from 1872 adolescents. There were 891 (47.6%) males and 981 females. Over all 154 (8.2%) adolescents were current cigarette smokers. Of the 891 males, 93 (10.4%) were current smokers while 61

(6.2%) of 981 females were current smokers (P<0.001). The study showed that female correspondents tended to smoke more cigarettes per day (frequency of smoking in the Previous 30 days) than males (<P=0.027).

Concerning the factors associated with smoking among males, the study revealed that, when compared to boys in Grade 9, boys in Grade 8 were 43%. (OR = 0.57, 95% CI 0.38, 0.86) less likely to have been smokers. Boys who received pocket money were 2.30 (95% CI 1.75, 3.03) times more likely to have been smokers compared with those who did not receive pocket money. Boys who had something like a t-shirt or a pen with a cigarette brand logo on it were 47% (OR = 1.47, 95% CI. 1.10, 1.98) more likely to have been smokers compared with those who had no such things. Compared with boys who had not seen anti-smoking messages at social gatherings, boys had seen such messages at social gatherings were 34% (OR = 1.34, 95% CT1.03, 1.75) more likely to have been smokers. Boys who had parents who smoked were 51 % OR = 1.51, 95 CI 1.15, 1.97) more likely to have been smokers than boys who had non-smoking parents. Boys who had closest friends who smoked were 74% (OR = 1.74, 95% CI 1.34, 2.27) more likely to smoke than boys who did not have closest friends who smoked.

This study also showed factors associated with smoking among females. Compared to girls in Grade 9, girls in Grade 7 were 94% (OR = 1.94% CI1.26 2.99) more likely to have been smokers. Girls who received pocket money were 2.41 (95% CI 1.72, 3,37) times more likely to have been smokers compared with girls who did not receive pocket money. Girls who had seen advertisements for cigarette at social gatherings were 52% (OR =1.52, 95% CI 1.10, 2.09) more likely to have been smokers compared with girls who had not seen such advertisements at social gatherings. Compared with girls who did not have parents who smoked were 63% (OR = 1.63, 95% CI 1.17, 2.27) more likely to have been smokers.

Kalaboka, Piau, King, Moreau, Choquet and Annes-Maesano (2008) conducted a study on gender differences in tobacco smoking among adolescents in French secondary schools. The objective of the study was to investigate the relationship between sex (genetic/biological) and gender (environment/cultural) factors in relation to adolescent tobacco smoking. The population of the study included all students in French secondary public school, whereas the sample for the study consisted of 11,582. Instrument used for

the study was self administered, standardized questionnaire and data was analyzed using multivariate analysis. The outcome of the study showed that 15.6% of the adolescents were regular smokers, 7.7% experimental smokers and 4.8% ex-smokers, with no statically gender difference.

Smoking status was categorized as never, experimental, former, occasional and regular smoker, according to WHO classification for youth. Students who had never tried smoking cigarettes were considered to never smokers. Experimental smokers were defined as those who tried smoking at least once in their life. Former consumed cigarettes survey. Occasional smokers consumed cigarettes "every now and then", while regular smokers smoked at least one cigarette every day. For the statistical analyses, two smoking variables were defined as follows:

Gender specific or socially influenced factors referred to those risk behaviours that are likely to occur more frequently among boys or girls respectively due to social patterns or cultural determinants, and to social pattern or cultural determinants, and included exposure to environmental tobacco smoking (ETS), alcohol consumption and drug abuse as risk behaviours that are gender influenced. ETS was defined as being exposed to environmental tobacco smoke of parents or peers. Alcohol consumption was based on Yes or No responses to drinking wine, beer or liquor several times per week and drug abuse consisted of having used illegal drugs (i.e. marijuana, cocaine, heroin etc.) more than 10 times in their lifetime. Family structure which can also be modulated by gender was defined as living with both parent and other living situation.

Boys and girls differed considerably regarding smoking behaviour and factors that were socially influenced or mediated. A greater proportion of boys, who smoked cigarettes regularly were more likely, compared to girls, to be virgins. Boys who smoked cigarettes regularly were less likely to have "at least 1 sexual partner" or engage in regular sexual activities. The pattern however was reversed among never smokers, as boys were less likely to be virgin, more likely to have sex regularly, more likely to use contraceptives. Boys who were experimenters were also slightly more likely than girls to follow this pattern. Differences among former or occasional smokers were less pronounced with respect to sexual activity and contraceptive use.

Lin, Wu, Chu, Lai, Shi, and Chen (2008), conducted a survey on factors associated with cigarette smoking among young military conscripts in Taiwan. Objective for the study was to identify the most important risk factors that influence cigarette smoking among young adult military conscripts in Taiwan. The population for the study included all young military conscripts in Taiwan. The sample consisted of 3569 subjects. Instrument used for the study was standard structured questionnaire. Chi-square test was used as method of data analysis. Smoking prevalence was influenced by the relative education levels of the father and mother to a similar extent. Smoking prevalence was 54.7% among subjects whose fathers had the least education, and only 39.0% among subjects whose fathers had the most education.

Multivariate logistic regression indicated that the factors most significantly associated with smoking behaviour of young adults were: education level, betel-nut chewing, alcohol drinking, parents' attitude toward smoking, proportion of peers who currently smoked, and peer attitude toward smoking. Based on the odds ratios (OR), subjects who chewed betel nuts had the highest probability of cigarette smoking (OR, 16.81; 95% confidence interval [CI], 11.35-25.91). Subjects with an education level ≤ junior high school had the second highest probability of cigarette smoking (OR, 5.36; 95% CI, 3.77-7.69). Subjects whose parents approved of smoking had the next highest probability of smoking (father's approval - OR, 3.26 and CI, 2.02-5.43; mother's approval - OR, 3.11 and 95% CI, 1.47-7.12), and a similar probability was observed when > 50% of the subjects' peers were current smokers (OR, 3.16; 95% CI, 2.42-4.15). Finally, subjects with drinking habit were likely to smoke as subjects whose peers approved of smoking (drinking - OR, 2.11 and 95% CI, 1.54-2.90; peer approval - OR, 2.27 and 95% CI, 1.60-3.22).

Awaisu, Mahamed, Abd Aziz, Sulaiman, Noordin, Muttalif, et al (2010), conducted a survey on tobacco use prevalence, knowledge and attitudes among newly diagnosed tuberculosis patients in Penang state and Wilayah Persekutuan Kuala Lumpur, Malaysia. The objective of the study was to document the prevalence, knowledge and attitudes among newly diagnosed tuberculosis, (TB) patients and learn about the tobacco use knowledge and attitudes of those who are smokers among the population The study population included all the TB patients who were current smokers at the time of TB

diagnosis and who were eligible and consented to be enrolled in the SCIDOTS project. The sample consisted of the 817 new cases of TB from January to December 2008. The questionnaire comprised of four sections: socio - demographic and smoking - related information (12 items), knowledge of tobacco use (11 items), tobacco use attitude (18 items), and practice of tobacco use (17 items). Method of data analysis was SPSS and studentsô-test and ANOVA.

As revealed by this study, of the 120 patients enrolled in the SCIDOTS project, 88 (73.33%) agreed to participate in the tobacco use KAP survey. Of this, 80 subjects were included in the data analysis (usable rate of 66.67%). Of the 80 participants, 56 (70.0%) were included in the data analysis (usable rate of 66.67%). Of the 80 participants, 56 (70.0%) were Malay, 18 (22.5%) were Chinese and only four (5.0%) were Indian. The respondents were predominantly males (98.7%), which reflect the low smoking rate among females in Malaysia. It was found from the study that nearly 61.3% of the patients were 42 years or older at the time of recruitment into the study. Furthermore, a large proportion (80%) of the respondents were either privately or self-employed and the majority (59%) lived in urban or semi-urban areas. When asked to rate their health status, nearly 40% of the TB patients who smoked rated themselves as unhealthy or very unhealthy, while 45% believed that they were average. The respondents were further asked of about their perception of stress of daily life and nearly half (48.1%) perceived daily life as not too stressful.

The majority of the participant (78.5%) reported that they were in support of the ongoing Malaysia government's campaigns against tobacco use (example. "Tak Nak" or Don't Want Programme) whereas a marginal proportional (3.8%) was not in support. In addition, nearly one third (32.9%) of the smoking TB Patients believed that the tobacco industry was truthful to the Malaysia people on the health dangers of tobacco use, whereas an equal percentage of the respondents had a contrary opinion.

Thirteen (16.3%) and 22(27.5%) of the respondents reported that they started smoking at the age of 13years or younger and 14-15 years, respectively. The study found that only 18.8% of the participants picked up the habit of smoking at an older age (20 years or older). When the nicotine dependence of the patients was measured using Fagerstrom Test for Nicotine Dependence (FTND), more than half (51.3%) were

moderately dependent (score of 4-6) and more than one - fourth (27.5%) were highly dependent on nicotine (score of 7 - 10). Furthermore, a moderately large proportion of the respondents (41.2%) reported that they have ever attempted to quit smoking while more than half (56.3%) have not. On the other hand, a marginal proportion of 2.5% had previously been abstinent for more than six months.

This study also showed that less than half (47.5%) of the study participants had knowledge about the body system on which cigarette smoking has the greatest negative effect and slightly more than half (52.5%) understood the reason why smoker's heart works harder than that of non-smoker. In addition, only 35% correctly recognized that smokers get tired easily due to inability of their lungs to exchange gases effectively. Also, the majority wrongly believed that smokeless tobacco (snuff) can increase athletic performance (60%) and it is a safe and harmless product (42.2%). Further, the study revealed that only one-fourth of the .respondents were able to recognize the dose response relationship between smoking and related diseases. However, at least 60% of the participants knew that smokers are less likely to live as long as non-smokers and that chronic bronchitis in smokers is caused by irritation of the respiratory system and the chemicals in cigarettes.

The study found that the mean (±SD) total score of tobacco use knowledge items was 4.23 ± 2.66.The influence of demographic and smoking-related characteristic on tobacco use knowledge was further tested using inferential statistics. Over all, the knowledge differed significantly with previous quit attempt, stage of change and ethnic groups. Patients who were in the preparation stage/pre-contemplation had significantly less knowledge than those in the preparation stage of change (3.73v 55.38; P = 0.004).a similar trend was observed among those who has been abstinent for more than six months when compared with those who had never attempted quitting smoking.

The tobacco use attitudes of the study population were evaluated using an 18-item scale. Notably, about two-third believed that smoking is fun. (65.1%) and a similar proportion believed that it calms nerves (61.3%). Many respondents (70.1%) also agreed or strongly agreed that smoking makes them relieve all life stresses. However, an over whelming proportion of the patients agreed or strongly agreed that smoking is a waste of money (87.5%), tobacco use is very dangerous to health (19.3%) and, smokers are more

likely to die from heart disease when compared with non - smokers (81 .3%). In addition, the vast majority had a positive attitude that; sales of cigarettes should be outlawed (91.3%), people below the age of 18 years should be restricted from purchasing cigarettes (95. 1%), and smoking should be allowed at fewer places than it were (63.8%). Conversely, many respondents were neutral on the point that smoking keeps one's weight down (41.3%) and the belief that it gives confidence (45.0%).

As regards the pattern of tobacco products used among the participants, the study found out that all the respondents had ever smoked cigarettes and admitted to annual cigarettes smoking. Only one of them denied monthly cigarette smoking. The use of snuff was moderately prevalent among the participants with 23 respondents (28.8%) reporting ever snuffled. Of this, 17 (73.9%) and 14 (60.9%) reported annual and monthly snuffing, respectively. However, the use of cigar and pipe was uncommon among the study population.

Summary of Literature Review

During the review of related literature pertinent to this study, a number of authors gave varied definitions of key concept that were used in this present study. These key concepts include tobacco and tobacco use, knowledge, attitude and practice. Tobacco is a nervous system stimulant that triggers complex biochemical and neurotransmitter disruptions Tobacco use has been defined as consumption of tobacco products by burning, chewing, inhalation, sniffing and sucking. In this present study, tobacco use means any purpose to which tobacco is taken into the body by the students in tertiary institutions or the use of any tobacco products by the students.

Following from the definitions, the researcher would like to define knowledge as applied in the study to mean an understanding of the meaning of tobacco use. Attitude refers to the feelings that predispose students in tertiary institutions toward tobacco use. The researcher defines practice as the way or action adopted by students in tertiary institutions toward tobacco use. It is an action that has become part and parcel of the students. Theories play an essential role in Health Education. The theories reviewed in the study include; social leavening theory, the theory of Reasoned action, Planned Behaviour Theory, and Self-efficacy theory.

Social learning theory propounded by Bandura (1977), states that one learns social behaviour by observing and imitating, and by being rewarded or punished. This theory places emphasis on the importance of observing and modeling behaviour, attitude and emotional reaction of others. Theory of reasoned action is based on the assumption that most behaviours of social relevance are under rational (control) power. The theory of planned behaviour states that, what an individual does is determined by personal motivation which in turn is determined by attitude, social support and perceived behavioural control. Self-efficacy theory also propounded by Bandura (1977), suggests that behaviour is best predicted by individualôs confidence in their ability to accomplish (practice) a given task.

Review of related literature takes a look at the measurement of knowledge, attitude and practice. So also some socio-demographic factors associated with knowledge, attitude and practice of tobacco use were discussed. These include, gender, age, smoking status of parents, siblings and friends.

Studies have been carried on tobacco use knowledge, attitude and practice among students in tertiary institutions the US and other parts of the world including Nigeria. Findings from their survey are documented. From the review of the related literature it is obvious that no study to the best of the knowledge of the investigator has been conducted in Kogi State on tobacco use knowledge, attitude, and practice among students in tertiary institution. Thus implies that there was no base line data available in the State on the topic. This situationwass worrisome; therefore, the present study was necessary in Kogi State, Nigeria, as it was intended to fill this gap.

CHAPTEER THREE

Methods

This chapter describes the research design, area of the study, population of the study, sample and sampling techniques, instruments for data collection, validity of the instrument, reliability of the instrument, methods of data collection and analysis.

Research Design

Descriptive survey research design was used in this study. Udonnan (1999) opined that this research deals with social sciences which involve interviews, questionnaires, and other sources of collecting information. It requires views from large sample of a given population and provides generalized statistics which data are abstracted for individual cases and presentation.

Awaisu et al, (2010) used this design and it was successful. This design was therefore, considered appropriate for use in the present study because it will give current information on tobacco use knowledge, attitude and practice among students in tertiary institutions in Kogi State.

Area of the Study

Kogi State is one of the States created in the North Central part of Nigeria on 27th August, 1991. The State was carved out of both Kwara and Benue States with its capital in Lokoja. The State is structured into 21 Local Government Areas, comprising of 3 major ethnic groups -Igala, Ebiri and Okun (Yoruba). Other minor groups include Ogori-Mangongo, Nupe, Bassa-Komo, Bassa-Nge and Gwari. The State is the most centrally located State in Nigeria with Rivers Niger and Benue meeting (confluence) at Lokoja, the capital city of the State. Being the gate-way State to the Federal Capital Territory, Kogi State witnesses an influx of people moving or passing through the State to other places including FCT, Abuja. The State has a number of higher institutions, both governments owned and private owned. This makes it possible for the young adults to flood the State with the attendant unhealthy life styles like smoking and drinking on increase. Also, being a riverine area, fishermen and women take to smoking which according to them helps to cope with the weather condition.

Another factor that predisposes the State to tobacco use is tourism and commercial activities whereby tobacco products are displaced and sold at cheaper rate.

Furthermore, the custom of parents who smoke and send their children to buy tobacco products for them also predisposes students to smoke.

Population for the Study

The population for the study consisted of all undergraduate students in the selected tertiary institutions in Kogi State, Nigeria. The selected institutions with their estimated population are: Kogi State College of Education, Ankpa(6,320), Kogi State University, Ayangba (18,580), Kogi State Polytechnic, Lokoja (5000) and School of Health Technology, Idah(1,700), total population is 31,600 (Public Relations Offices of the institutions).

Sample and Sampling Techniques

A two stage sampling technique was used. Tertiary Institutions were selected by systematic random sampling (SRS) at the first stage (see selection procedure, Appendix D). This was done by first listing all tertiary institutions in Kogi State, used a table of random number to collect the first institution while other institutions was selected afterwards by SRS with $K = N/n$

Where N = total population

n = sample size

K = sample interval.

The number of respondents from selected institutions was determined using probability proportional research (see Appendix E).

The second stage consisted of selecting respondents by random sampling of balloting without replacement. The proportional allocation was applied based on population of each sampled institutions. Sample size was determined in line with Yaro Yamane formula (Achor and Ejigbo 2010) for estimating sample size given by

$$n = \frac{N}{1 + N(e)^2}$$ Where

n = sample size to be studied

N = the total population of the sampled institution

e = the error margin, that is the level of significance = 0. 05

Given the total population of sampled tertiary institutions as:

a. Kogi State College of Education = 6320
b. Kogi State University, = 18,580
c. Kogi State Polytechnic, = 5000
d. School of Health Technology = 1700

Total Population = 31, 600

Source: Public Relations Office (PRO) of the sampled institutions.

The sample size n is therefore determined as follows: $\frac{N}{1 + N (e)^2}$

Therefore, $n = \frac{31,600}{1 + 31,600 (.05)^2}$

$\frac{31,600}{1 + 31,600 (0.05x\ 0.05)} = \frac{31,600}{1 + 31,600x\ 0.0025}$

$= \frac{31,600}{1 + 79}$

$= \frac{31,600}{80} = 395 = 395.$

Therefore, the sample size that was studied is 395. Since the populations of the institutions are not equal, proportional allocation to size was used to select the number of respondents to be interviewed from each institution as:

Kogi State College of Education $\frac{6320}{31,600} \times 395 = 79$

Kogi State University $\frac{18,580}{31,600} \times 395 = 232.25 = 232$

School of Health Technology $\frac{1700}{31,600} \times 395 = 21.25 = 21$

Kogi State Polytechic $\frac{5000}{31,600} \times 395 = 62.50 = 63$

Instrument for Data Collection

The instrument for data collection was a 40-item researcher-design questionnaire called Tobacco Use Knowledge, Attitude and Practice Questionnaire TUKAPQ (see Appendix C). The questionnaire was comprised of four sections (A - D). Section A consists of socio-demographic and smoking-related information (4 items). Section B consists of 14 items on knowledge of tobacco use, section C consists of 12 attitudinal statements on tobacco use, while section D has 10 items on tobacco use practice. Multiple choice response formats was used for the knowledge statements with one correct answer for each question. The 12 items attitudinal statements used a four-point rating scale that indicates degrees of agreement or disagreement (strongly agree, agree, disagree and strongly disagree). Furthermore, the questions inquiring about tobacco use practice by the students, the respondents were required to respond "Yes" or "No" attached to each of the items. "Yes" is attached to a practice that has taken place while "No" is attached to an action or behaviour that the individual does not adopt.

Validity of the instrument.

The content and face validity of the research instrument was established by five experts, four of them were from the Department of Health and Physical Education and one from the Department of Statistics, all of the University of Nigeria, Nsukka. Their constructive criticisms and useful suggestions were used to produce the final copy of the instrument.

Reliability of the instrument.

The reliability of instrument was established using split-half method. Frankfort-Nachmias and Nachmias (2006) explained the split-half method, as a method of accessing the reliability of an instrument by dividing items into two equivalent parts and correlating the scores in one part with scores in the other. Twenty copies of the questionnaire was administered to twenty students in tertiary institutions who were not part of the study but have the same characteristics with the study population. The questionnaire were filled and collected back on the spot. The responses of each half were compared for degree of internal consistency, using Kudder-Richardson formula (K-R 21). Ogbazi and Okpala (1994) opined that if a reliability coefficient index obtained is up to .60 and above, the instrument is considered reliable. Following from this, the reliability

index of questionnaire (TUKAPQ) was .65 and therefore, considered reliable for the achievement of the objective of this study.

Method of Data Collection

In order to facilitate easy access to the higher institutions, a letter of introduction dully signed by the Head of Department of Health and Physical Education, University of Nigeria, Nsukka was obtained. This was presented to the authority of each institution seeking their permission to carry out the research study. Copies of the questionnaire were distributed to the respondents by the researcher and the research assistants recruited by the researcher. They were briefed on the modalities for the administration. The administered instruments were retrieved on the spot after filling by the respondents.

Method of Data Analysis

The responses obtained from the questionnaire were compiled using the Statistical Package for Social Sciences SPSS (1999) batch system to analyze the data. The data were analyzed using:

i. Frequency distribution table to ascertain the frequency of responses to each question on the instrument
ii. Simple percentage to determine knowledge and practice respectively while,
iii. Arithmetic mean and standard deviation were used to determine attitudes of students in tertiary institutions.
iv. The t-test statistic was used in testing hypotheses one to four while Chi-Square statistic was used in testing hypotheses five and six.

In determining the level of knowledge of respondents regarding tobacco use the level of knowledge questions (1,4and 5), data was marked and graded over one hundred per cent 100%). By the above criteria a score of 40-59 per cent was considered average or moderate level of knowledge while a score of 60 -80 per- cent was considered high level of knowledge. A score of above 80 per cent was considered very high level of knowledge. To determine the attitude of the students, a four point attitude measurement scale modified by Osuala (2005), Enyi (2006) and Nworgu (2006) on a four point scale

was used to answer the research questions bothering on attitude questions (2, 6 and 7) inquiring into the attitude of students towards tobacco use in Kogi State. In each positive statement, four (4) points was assigned to strongly agree (SA), three (3) points was assigned to agree (A), two (2) points to (D) and one (1) to strongly Disagree (SD), while in the case of negative statements, the reverse was the case where one point was assigned to Disagree (D) and four (4) points to Strongly Disagree (SD). In determining practice of tobacco use, the ñYesò, or ñNoò response emphasized by Ifegbesan (2008) was used to answer the research questions 3, 8 and 9 inquiring into the practice of tobacco use among students in tertiary institutions in Kogi State. ñYesò was assigned to a practice that has taken place and ñNoò to a practice that the individual did not adopt. Finally, t-Test statistics was used in testing hypotheses one to four, Chi-Square statistics was used in testing hypotheses five and six, concerning tobacco use knowledge attitude and practice among students in tertiary institutions in Kogi State, Nigeria.

CHAPTER FOUR

Result and Discussion

This chapter presents and discusses the findings of the study on Tobacco Use Knowledge, Attitude and Practice among Students in Tertiary Institutions in Kogi State, Nigeria. A total of three hundred and ninety-five copies of the questionnaire were distributed to the respondents, all of them were filled and returned and used for the study. The findings of the study are hereby presented in the tables below according to the research questions and the null hypotheses postulated for the study, as well as the reviewed related literature.

Results

Research question 1.

What is the level of knowledge possessed by students in tertiary institutions regarding tobacco use? Data answering the above research question are contained in Table 1.

Table 1

Students' Level of Knowledge of Tobacco Use

	N	$\overline{X}$	**SD**
Knowledge of tobacco use	395	82.71	17.386

Data in Table 1 above showed percentage score of 82.71 which fell between 80 per cent and above. This implies that the level of knowledge possessed by the students in tertiary institutions was very high.

Research question 2.

What is the attitude of the students in tertiary institutions towards tobacco use? Data answering the above research question are contained in Table 2.

Table 2
Attitude of Students Towards Tobacco Use (n = 395)

S/N	Items	Mean	SD
19	Staying close to people that smoke cigarette is not a problem	2.47^{-v}	1.023
20	Tobacco use does not always pose hazards to health	2.26^{-v}	1.042
21	It is fashionable to smoke cigarette	2.31^{-v}	.978
22	Pregnant women can smoke since it feels good	2.13^{-v}	.989
23	Tobacco use is good because it relieves one from boredom and fatigue	2.42^{-v}	.980
24	Women who smoke cigarettes are sharp	2.40^{-v}	.991
25	Tobacco smoke does not cause harm to eyes	2.23^{-v}	.926
26	Adolescents who use tobacco make more friends	2.41^{-v}	1.000
27	Tobacco use has some medicinal and beneficial effects	2.53^{+v}	1.134
28	Quitting tobacco use is not easy	2.62^{+v}	1.105
29	Anti-smoking messages are not acceptable to me	2.28^{-v}	.914
30	Tobacco smoking makes one smart	2.38^{-v}	.949
	Grand mean	**2.37^{-v}**	

+ve Positive
-ve Negative

Data in Table 2 shows an overall attitudinal mean score of 2.37 which is less than the criterion mean of 2.50. This implies that the attitude of the students towards tobacco use was negative. The table also shows that all the individual item mean scores regarding attitude of the students towards tobacco use were less than the criterion mean except in two items. ñTobacco use has some medicinal and beneficial effectsò ($\overline{X}$ = 2.53), and ñquitting tobacco use is not easyò ($\overline{X}$ = 2.62). This implies that students had negative attitude to these items except in these two items. The SD which ranges from .914 to 1.134 implied that the responses were close to one another.

Research question 3.

What is the practice of tobacco use by students in tertiary institutions? Data answering this research question are contained in Table 3.

Table 3
Students Practice of Tobacco Use (n = 395).

S/N	Items	Yes	%	No	%
31	Have you ever smoked cigarettes or used any other tobacco product even a single puff before now?	242	61.3	153	38.7
32	Do you stop smoking when sick?	163	41.3	232	58.7
33	Do you chew tobacco?	78	19.7	317	80.3
34	Have you ever smoked at home, school or social gathering?	209	52.9	186	47.1
35	Do you smoke up to three sticks of cigarettes in a day?	145	36.7	250	63.33
36	Can you stay throughout a day without smoking cigarettes?	271	68.6	124	31.4
37	Do you usually smoke cigarette during cold weather?	147	37.2	248	62.8
38	Have you ever participated in cigarette smoking competition?	66	16.7	329	83.3
39	Have you ever smoked or use other tobacco products in the presence of your parents?	105	26.6	290	73.4
40	Do you just smoke for pleasure sake?	158	40.0	237	60.0

Table 3 shows that majority of the students ever smoked cigarettes or used any other tobacco products (61.3%) and can stay through out a day without smoking cigarette (68.6%).

The Table further shows that slightly above one half (52.9%) of the students smoked at home, school or social gathering while about one third smoked cigarettes during cold weather (37.2%) and 36.7 per cent smoked up to three sticks of cigarette in a day. The Table also shows that more than half of the students smoked when sick while 41.3 per cent, 40 per cent and 26.6 per cent used snuff, smoked for pleasure and in the presence of their parents respectively. The Table also reveals that 19.7 per cent of the students chewed tobacco while 16.7 per cent have participated in cigarette smoking competition.

Research question 4.

What is the level of knowledge possessed by students in tertiary institution regarding tobacco use according to age? Data answering the above research question are contained in Table 4 below.

Table 4

Level of Knowledge Possessed by the Students According to Age (n = 395)

Age	N	$\overline{X}$	SD
16-17years	42	77.89	15.60
18 and above	353	83.29	17.52

Table 4 show that the mean score of students aged 18 years and above ($\overline{X}$ = 83.29) was slightly higher than those aged 16-17years ($\overline{X}$ = 77.89). This implies that students of these age groups possessed very high and high knowledge regarding tobacco use respectively. The SD which ranges from 15.60 to 17.52 showed that the responses were close to one another.

Research question 5.

What is the level of knowledge possessed by male and female students in tertiary institutions regarding tobacco use according to gender? Data answering this research question are contained in Table 5.

Table 5

Level of Knowledge Possessed by Students According to Gender

Age	N	$\overline{X}$	SD
Male	216	82.87	16.97
Female	179	82.52	17.92

Data in Table 5 shows that the mean score of male students ($\overline{X}$ = 82.87) was slightly higher than that of the female students ($\overline{X}$ = 82.52). This implies that both male students and female students possessed very high level of knowledge regarding tobacco

use. The Table also shows that the SD which ranges from 16.97 to 17.92 indicated that their level of knowledge were close together.

Research question 6.

What is the attitude of students in tertiary institutions towards tobacco use according to age? Data answering this research question are contained in Table 6

Table 6

Attitude of students in tertiary institutions towards tobacco use according to age

	Items	**Age groups**			
		16-17years (n=42)		**18 and above (n = 353)**	
S/N		$\overline{X}$	**SD**	$\overline{X}$	**SD**
19	Staying close to people who smoke cigarette is not a problem	2.36	1.122	2.48	1.012
20	Tobacco does not always pose hazards to health	2.31	1.137	2.25	1.032
21	It is fashionable to smoke cigarette	2.40	1.106	2.30	.963
22	Pregnant women can smoke cigarette since it feels good	2.17	.986	2.12	.991
23	Tobacco use is good because it relives one from boredom and fatigue	2.38	1.081	2.42	.968
24	Women who smoke cigarettes are sharp	2.24	1.008	2.42	.989
25	Tobacco smoke does not cause harm to the eyes	2.19	1.018	2.23	.915
26	Adolescents who use tobacco make more friends	2.31	.950	2.42	1.006
27	Tobacco use has some medicinal and beneficial effects	2.76	1.144	2.50	1.131
28	Quitting tobacco use is not easy	2.60	1.127	2.62	1.104
29	Anti-smoking messages are not acceptable to me	2.21	.976	2.29	.908
30	Tobacco smoking makes one smart	2.24	.958	2.39	.9648
	Grand mean	**2.35**	**1.051**	**2.37**	**.999**

Table 6 shows that the grand attitudinal mean score of students aged 18 years and above ($\overline{X}$ = 2.37) was slightly higher than those aged 16-17years ($\overline{X}$ = 2.35). These means were less than the criterion mean of 2.50, implying that the overall attitude of the students towards tobacco use was negative. The SD which range from .950-1.144 (16-17

years) and .908-1.131(18 years and above) indicated that the responses were close to one another.

Research question 7.

What is the attitude of students in tertiary institutions towards tobacco use according to gender? Data answering this research question are contained in Table 7.

Table 7

Attitude of Students in Tertiary Institutions Towards Tobacco Use According to Gender

		Gender			
		Male (n=216)		Female (n = 179)	
S/N	Items	$\overline{X}$	SD	$\overline{X}$	SD
19	Staying close to people who smoke cigarette is not a problem	2.41	1.030	2.55	1.012
20	Tobacco does not always pose hazards to health	2.17	1.030	2.37	1.048
21	It is fashionable to smoke cigarette	2.30	.981	2.34	.977
22	Pregnant women can smoke cigarette since it feels good	2.11	.996	2.15	.984
23	Tobacco use is good because it relives one from boredom and fatigue	2.38	.976	2.46	.984
24	Women who smoke cigarettes are sharp	2.44	.991	2.36	.992
25	Tobacco smoke does not cause harm to the eyes	2.20	.928	2.26	.925
26	Adolescents who use tobacco make more friends	2.40	.998	2.42	1.005
27	Tobacco use has some medicinal and beneficial effects	2.52	1.145	2.52	1.123
28	Quitting tobacco use is not easy	2.65	1.102	2.58	1.111
29	Anti-smoking messages are not acceptable to me	2.24	.929	2.32	.897
30	Tobacco smoking makes one smart	2.36	.964	2.40	.933
	Grand mean	**2.35**	**1.006**	**2.40**	**.999**

Table 7 shows that the grand attitudinal mean score of the male students ($\overline{X}$ = 2.40) was slightly higher than their female counterparts ($\overline{X}$ = 2.35). This implies that both the male and female students had negative attitude towards tobacco use since these means were less than the criterion mean of 2.50. The Table also indicates the Standard

Deviation which ranges from .928-1.145 (males) to .925-1.123 (females), indicating that the responses are close to one another.

Research question 8.

What is the practice of tobacco use of students in tertiary institutions according to age?

Data answering this research question are contained in Table 8.

Table 8

Practice of Tobacco Use According to Age

		Age group (100%)							
		16-17years (n = 42)				18 and above (n = 353)			
S/N	Items	No	%	Yes	%	No	%	Yes	%
31	Have you ever smoked or used any other tobacco products like snuff in the past?	18	42.9	24	57.1	135	38.2	218	61.8
32	Do you stop smoking when sick?	27	64.3	15	35.7	205	58.1	148	41.9
33	Do you chew tobacco?	35	83.3	7	16.7	282	79.9	71	20.1
34	Have you ever smoked at home, school or social gathering?	19	45.2	23	54.8	165	47.3	186	52.7
35	Do you smoke up to three sticky cigarettes in a day?	28	66.7	14	33.3	222	62.9	131	37.1
36	Can you stay throughout a day without smoking cigarettes?	11	26.2	31	73.8	113	32.0	240	68.0
37	Do you usually smoke cigarette during cold weather?	31	73.8	11	26.2	217	61.5	136	38.5
38	Have you ever participated in cigarettes smoking competition?	35	83.3	7	16.7	294	83.3	59	16.7
39	Have you ever smoked or used other tobacco products in the presence of your parents?	37	88.1	5	11.9	253	71.7	100	28.3
40	Do you just smoke for pleasure sake?	26	61.9	16	38.1	211	59.8	142	40.2

Table 8 shows that majority of the students aged 18 years and above (61.8%) than those aged 16-17 years (57.1%) ever smoked cigarettes or used any other tobacco products. The Table also reveals that more students aged 16-17 years (64.3%) than those aged 18 years and above (58.1%) do not stop smoking when sick. The Table equally shows that fewer students aged 18 and above (20.1%) than those aged 16-17 years (7%)

had chewed tobacco. The Table also shows that majority of the students aged 16-17years (54.8%) than those aged 18 years and above (52.7%) have ever smoked at home, school or social gathering. More than one third of the students aged 18years and above (37.1%) than those aged 16.17years (33.3%) smoked up to three sticks of cigarettes in a day. Majority of the students aged 16-17years (73.8%) than those aged 18 years and above (68%) could stay throughout the day without smoking. Slighter than one third of the students aged 18 and above (38.5%) than those aged 16-17years smoked during cold weather. Equal percentages of the students aged 16-17yeares, (16.7%), 18 years and above (16.7%) had participated in cigarettes smoking competition. Also fewer students aged 16-17years (5%) than those aged 18 years and above (28.3%) ever smoked in the presence of their parents while more than one third of the students aged 18 years and above (40.2%) than those aged 16-17years (38.1%) smoked for pleasure sake.

Research question 9.

What is the practice of tobacco use of students in tertiary institutions according to gender? Data answering this research question are contained in Table 9.

Table 9

Practice of Tobacco Use According to Gender

		Gender (100%)							
		Male (n = 216)				Female (n = 179)			
S/N	Items	No	%	Yes	%	No	%	Yes	%
31	Have you ever smoked or used any other tobacco products like snuff in the past?	91	41.1	125	57.9	62	34.6	117	65.4
32	Do you stop smoking when sick?	131	60.6	85	39.4	101	54.4	78	43.6
33	Do you chew tobacco?	170	78.7	46	21.3	147	82.1	32	17.9
34	Have you ever smoked at home, school or social gathering?	101	46.8	115	53.2	85	47.5	94	52.5
35	Do you smoke up to three sticky cigarettes in a day?	141	65.3	75	34.7	109	60.9	70	39.1
36	Can you stay throughout a day without smoking cigarettes?	66	30.6	150	69.4	58	32.4	121	67.6
37	Do you usually smoke cigarette during cold weather?	136	63.0	80	37.0	112	62.6	67	37.4
38	Have you ever participated in cigarettes smoking competition?	176	81.5	40	18.5	153	85.5	26	14.5
39	Have you ever smoked or used other tobacco products in the presence of your parents?	151	69.9	65	30.1	139	77.7	40	22.3
40	Do you just smoke for pleasure sake?	131	60.6	85	39.4	106	59.2	73	40.8

Table 9 reveals that majority of the female (65.4%) than male students (57.9%) had ever smoked or used any other tobacco products. Majority of the students, 60.6% (male) than female (54.4%) did not stop smoking when sick. Fewer female (17.9%) than male students (21.3%) chewed tobacco. More than half of the male (53.2%) male than female students (52.5%) have ever smoked at home, school or social gathering. More than one third of the female (39.1%) than male students (34.7%) smoked up to three sticks of cigarettes in a day. Majority of the male (69.4%) than female students (67.6%) stayed throughout a day without smoking cigarettes. Over one third of the (37.4%) female than male students (37%) smoked during cold weather. Less than two third of the (18.5%) male than female students (14.5%) participated in cigarette smoking competition. About one third of the (30.1%) male than female students (22.3%) had

smoked in presence of their parents while almost equal proportion of female (40.8%) than male (39.4) students smoked for pleasure sake.

Hypothesis one.

There is no significant difference in level of knowledge possessed by male and female students in tertiary institutions regarding tobacco use. Data testing this hypothesis are contained in Table 10.

Table 10

Summary of t-Test Analysis Testing the Null-Hypothesis of No Significance Difference in Tobacco Use Knowledge Between Male and Female Students

Gender	N	$\overline{X}$	SD	t-cal	d.f.	P-value
Male	216	82.87	16.9714525			
Female	179	82.52	17.9192004	.198	393	.843

Data in Table 10 reveal the calculated t-value with its corresponding P-values for tobacco use knowledge of male and female students at 393 degrees of freedom ($t = .198$, $p = .843 > .05$). Since the p-value is greater than .05 level of significance, the null hypothesis of no significant difference in tobacco use of male and female students was accepted. This implies that gender does not make any difference in tobacco use knowledge of students.

Hypothesis two.

There is no significant difference in the level of knowledge possessed by the students in tertiary institutions regarding tobacco use according to age. Data testing the above hypothesis are contained in Table 11.

Table 11

Summary of t-Test Analysis Testing the Null hypothesis of No Significant Difference in Tobacco Use Knowledge of Students According to Age.

Age group	N	$\overline{X}$	SD	t-Cal	d.f.	P-value
16-17years	42	77.89	15.6021916	1.91	393	.057
18 and above	353	83.29	17.5179093			

Table 11 indicates the calculated t-value with its p-value for tobacco use knowledge of students at 393 degrees of freedom (t -cal = 1.907, p = .057 > .05) since the p-values was greater than .05 level of significant difference, was accepted. This signifies that age was not significant in determining the studentôs level of knowledge of tobacco use.

Hypothesis 3.

There is no significant difference in tobacco use attitude of the students in tertiary institutions according to gender. Data testing the hypothesis are contained in Table 12.

Table 12

Summary of t-Test Analysis Testing the Null Hypothesis of No Significant Difference in Tobacco Use Attitude of Students According to Gender.

		Gender						
		Male (n = 216)		Female (n = 179)				
S/N	Items	$\overline{X}$	SD	$\overline{X}$	SD	t-Cal	df	P-value
19	Staying close to people that smoke cigarette is not a problem	2.41	1.030	2.55	1.012	-1.356	393	.176
20	Tobacco does not always pose hazards to health	2.17	1.030	2.37	1.048	-1.925	393	.055
21	It is fashionable to smoke cigarette	2.30	.981	2.34	.977	-.393	393	.695
22	Pregnant women can smoke cigarette since it feels good	2.11	.996	2.15	.984	-.341	393	.733
23	Tobacco use is good because it relives one from boredom and fatigue	2.38	.976	2.46	.984	-.849	393	.397
24	Women who smoke cigarettes are sharp	2.44	.991	2.36	.992	.821	393	.412
25	Tobacco smoke does not cause harm to the eyes	2.20	.928	2.26	.925	-.569	393	.570
26	Adolescents who use tobacco make more friends	2.40	.998	2.42	1.005	-.216	393	.829
27	Tobacco use has some medicinal and beneficial effects	2.52	1.145	2.54	1.145	-.155	393	.877
28	Quitting tobacco use is not easy	2.65	1.102	2.58	1.111	.601	393	.548
29	Anti-smoking messages are not acceptable to me	2.24	.929	2.32	.897	-.901	393	.368
30	Tobacco smoking makes one smart	2.36	.964	2.40	.933	-.370	393	.712
	Grand mean	**2.35**	**1.001**	**2.40**	**1.001**	**.154**		**0.531**

Table 12 indicates the calculated t-value with its corresponding p-value for tobacco use attitude of students according to gender at 393 degrees of freedom. All the

individual items p-values were greater than the .05 level of significance; therefore the null hypothesis of no significant difference in tobacco use attitude of students according to gender was accepted. This shows that gender does to make any difference in the attitude of the students.

Hypothesis 4.

There is no significant difference in tobacco use attitude of the students according to age. Data testing the above hypothesis are contained in Table 13.

Table 13

Summary of t-Test Analysis Testing the Null Hypothesis of No Significant Difference in Tobacco Use Attitude of Students According to Age.

		Age groups						
		16-17 (n = 42)		18 and above (n = 353)				
S/N	Items	$\bar{X}$	SD	$\bar{X}$	SD	t-Cal	d.f.	P-value
19	Staying close to people that smoke cigarette is not a problem	2.36	1.122	2.48	1.012	-.762	393	.447
20	Tobacco does not always pose hazards to health	2.31	1.137	2.25	1.032	.337	393	.736
21	It is fashionable to smoke cigarette	2.40	1.106	2.30	.963	.636	393	.525
22	Pregnant women can smoke cigarette since it feels good	2.17	.986	2.12	.277	.277	393	.782
23	Tobacco use is good because it relives one from boredom and fatigue	2.38	1.081	2.42	.968	-.257	393	.797
24	Women who smoke cigarettes are sharp	2.24	1.008	2.42	.989	-1.138	393	.256
25	Tobacco smoke does not cause harm to the eyes	2.19	1.018	2.23	.915	-.276	393	.782
26	Adolescents who use tobacco make more friends	2.31	.950	2.42	1.006	-.707	393	.480
27	Tobacco use has some medicinal and beneficial effects	2.76	1.177	2.50	1.131	1.425	393	.155
28	Quitting tobacco use is not easy	2.60	1.127	2.62	1.104	-.139	393	.889
29	Anti-smoking messages are not acceptable to me	2.21	.976	2.29	.908	-.481	393	.631
30	Tobacco smoking makes one smart	2.24	.958	2.39	.948	-1.005	393	.315
	Grand mean	**2.34**	**.969**	**2.370**	**.937**	**-.0174**		**0.596**

Data in Table 13 indicates the calculated t-values with their corresponding p-values for tobacco use attitude of students according to age at 393 degrees of freedom. Since all the p-values were greater than .05 level of significance, the null hypothesis of no significant difference in tobacco use attitude of the students according to age was

accepted. This implies that age does not make any difference in tobacco use attitude of students.

Hypothesis 5.

There is no significant difference in tobacco use practice of the students in tertiary institutions according to gender. Data testing this hypothesis are contained in Table 14.

Table 14

Summary of Chi-square Analysis Testing the Null Hypothesis of No Significant Difference in Tobacco Use Practice of Students According to Gender.

		Gender										
		Male (n = 216)				**Female (n = 179)**						
		Yes		No		Yes		No		χ^2-Cal	d.f.	P-value
S/N	**Items**	O	E	O	E	O	E	O	E			
31	Have you ever smoked or used any other tobacco products like snuff in the past?	91	83.7	125	132.3	62	69.3	117	109.7	2.316	1	.128
32	Do you stop smoking when sick?	131	126.9	85	89.1	101	105.1	78	73.9	.720	1	.396
33	Do you chew tobacco?	170	173.3	46	42.7	147	143.7	32	35.3	.722	1	.395
34	Have you ever smoked at home, school or social gathering?	101	101.7	115	114.3	85	84.3	94	94.7	.021	1	.885
35	Do you smoke up to three sticky cigarettes in a day?	141	136.7	75	79.3	109	113.3	70	65.7	.810	1	.368
36	Can you stay throughout a day without smoking cigarettes?	66	67.8	150	148.2	58	56.2	121	122.8	.155	1	.694
37	Do you usually smoke cigarette during cold weather?	136	1396	80	80.4	112	112.4	67	66.6	.006	1	.936
38	Have you ever participated in cigarettes smoking competition?	176	179.9	40	36.1	153	149.1	26	29.9	1.122	1	.290
39	Have you ever smoked or used other tobacco products in the presence of your parents?	151	158.6	65	57.4	139	131.4	40	47.6	3.010	1	.083
40	Do you just smoke for pleasure sake?	131	129.6	85	86.4	106	107.4	73	71.6	.083	1	.773
	Grand mean									**0.8965**		**0.4972**

Table 14 shows the Chi-square values and their corresponding p-values for tobacco use practice of the students according to gender at one degree of freedom. All the p-values of the individual items in the table were greater than .05 level of significance. Therefore, the null hypothesis of no significant difference in the tobacco use practice of the students according to gender was accepted. This means that the practice of tobacco use by students was the same.

Hypothesis 6.

There is no significant difference in tobacco use practice of the students in tertiary institution according to age. Data verifying this hypothesis are contained in Table 15 below.

Table 15

Summary of Chi-square Analysis Testing the Null Hypothesis of No Significant Difference in Tobacco Use Practice of Students According to Age.

	Items	**Gender**										
		16-17years (n = 42)				**18 and above (n = 353)**				χ^2-Cal	d.f.	P-value
		Yes		No		Yes		No				
S/N		O	E	O	E	O	E	O	E			
31	Have you ever smoked or used any other tobacco products like snuff in the past?	18	16.3	24	25.7	135	136.7	218	216.3	.337	1	.562
32	Do you stop smoking when sick?	27	24.7	15	17.3	205	207.3	148	145.7	.598	1	.439
33	Do you chew tobacco?	35	33.7	7	8.3	282	283.3	71	69.7	.281	1	.596
34	Have you ever smoked at home, school or social gathering?	19	19.8	23	22.2	167	166.2	186	186.8	.065	1	.799
35	Do you smoke up to three sticky cigarettes in a day?	28	26.6	14	15.4	222	223.4	131	129.6	.230	1	.631
36	Can you stay throughout a day without smoking cigarettes?	11	13.2	31	28.8	113	110.8	240	242.2	.590	1	.442
37	Do you usually smoke cigarette during cold weather?	31	26.4	11	15.6	217	221.6	136	131.4	2.445	1	.118
38	Have you ever participated in cigarettes smoking competition?	35	35.0	7	7.0	294	294.0	59	59.0	.000	1	.994
39	Have you ever smoked or used other tobacco products in the presence of your parents?	37	30.8	5	11.2	253	259.2	100	93.8	5.188	1	.023
40	Do you just smoke for pleasure sake?	26	25.2	16	16.8	211	211.8	142	141.2	.071	1	.790
	Grand mean									**0.981**		**.539**

Table 15 shows the calculated Chi-square values with their corresponding p-values for tobacco practice of students according to age at one degree of freedom. The table indicates that all the p-values are greater than .05 level of significance except in one item ñquitting tobacco use is not easyò (P = .023 < .05). This implies that the null hypothesis of no significant difference for tobacco use practice of the students according to age was accepted while the students differed in their practice of tobacco use in one item, that is, have you ever smoked at home, school or social gathering? (P = .013 < .05).

Summary of Major Findings

Following from the analysis of data, the major findings of the study are hereby summarized as follows:

1. Students in tertiary institutions had very high level ($\overline{X}$ = 82.71) of knowledge regarding tobacco use. This answers research question one.
2. Students in tertiary institutions had negative attitude (grand $\overline{X}$ = 2.37) towards tobacco use. This answers research question two.
3. Majority of the students in tertiary institutions (61.3 per cent) had practiced tobacco use. This answers research question three.
4. Students in tertiary institutions aged 18 years and above had very high level ($\overline{X}$ = 83.29) of knowledge while those aged 16-17years had high level ($\overline{X}$ = 77.89) of knowledge regarding tobacco use. This answers research question four.
5. Male and female students in tertiary institutions had very high level ($\overline{X}$ = 82.87 and $\overline{X}$ = 82.52 respectively) of knowledge regarding tobacco use. This answers research question five.
6. Students in tertiary institutions aged 18 years and above had negative attitude (grand $\overline{X}$ = 2.37) towards tobacco use. Also those aged 16 to 17 years had negative attitude ($\overline{X}$ = 2.35) towards tobacco use. This answers research question six.
7. Male and female students in tertiary institutions had negative attitude ($\overline{X}$ = 2.35 and $\overline{X}$ = 2.40 respectively) towards tobacco use. This answers research question seven.
8. All age groups of students in tertiary institutions had practiced tobacco use (18 and above 61.8 per cent, 16 to 17 years, 75.1 %). This answers research question eight.
9. Majority of female students in tertiary institutions (65.4 %) than male students had practiced tobacco use. Tobacco use. This answers research question nine.
10. There was no significant difference in the level of knowledge possessed by both male and female students in tertiary institutions regarding tobacco use (t-cal.198, p = .843 > .05). This tests hypothesis 1.

11. There was no significant difference in the knowledge possessed by the students in tertiary institutions regarding tobacco use according to age (t-cal 1.907, p = .057 > .05). This tests hypothesis 2.
12. There was no significant difference in tobacco use attitude of the students in tertiary institutions according to gender (grand tï cal-.154, p = 0.531). This tests hypothesis 3.
13. There was no significant difference in tobacco use attitude of the students according to age (grand tï cal= -.937, p=.596> .05. This tests hypothesis 4.
14. There was no significant difference in tobacco use practice of the students according to gender (grand σ^2 = cal = .8965 and p = .4972 > .05). This tests hypothesis 5.
15. There was no significant difference in the tobacco use practice of the students according to age (Grand σ^2 = cal .9805 and p = .5394 > .05). This tests hypothesis 6.

Discussion

The findings of the study are hereby discussed under the following sub-headings:

1. Tobacco use knowledge among students in tertiary institutions.
2. Tobacco use attitude among students in tertiary institutions
3. Tobacco use practice of student in tertiary institutions
4. Difference in tobacco use knowledge, attitude and practice of students in tertiary institutions.

Tobacco use knowledge among students in tertiary institutions.

Result in Table 1 revealed that students in tertiary institutions in Kogi State possessed very high level of knowledge regarding tobacco use. This finding was anticipated and therefore not surprising. This is because many tertiary institutions offer courses on tobacco education as contained in their curriculum. The high level of knowledge also may be indicative of the fact that tobacco products are widely available in open markets and sold at cheaper rate without any legislation placed on them. This finding corroborates that of Torabi, Yang and Li (2002) in which they reported that majority of their respondents (87%) exhibited very high level of knowledge regarding tobacco use.

Result in Table 4 indicated that the age groups 16-17years and 18 years and above had high and very high level of knowledge respectively regarding tobacco use. This finding was expected and not surprising. This is because experience has shown that right from secondary school instruction in tobacco education as contained in the senior secondary school curriculum was passed on to the students and continued in the tertiary institution. Also, information from mass media may have contributed to this very high level of knowledge of tobacco use. However, this finding is contrary to that of Adams (1975) who reported that the respondents had low level of knowledge in all the age groups. However considering the date of the publication, a lot have changed.

Result in Table 5 showed that both male students and female students had possessed very high level of knowledge regarding tobacco use. This finding was not surprising and therefore was expected. This is because both male and female students are exposed to some instruction on tobacco education in the tertiary institution. This high level of knowledge could also be due to the advent of internet browsing whereby students are exposed to all manners of information via the internet. It could also be as a result of advertisement placed in the news papers, television and other electronic media. This finding is in consonance with that of Torabi, et al (2002) in which both male and female genders had very high level of knowledge regarding tobacco use.

Tobacco use attitude among students in tertiary institutions.

Result in Table 2 indicated that the students in tertiary institutions had negative attitude towards tobacco use. This finding was anticipated and thus not a surprise. This is because with very high level of knowledge of tobacco use and its attendant harmful effects, it is expected that the students would develop negative attitude towards its use. This finding agrees with that of Oladipo (1988) which showed that about (57 %) of the students used in the study had negative attitude towards tobacco use. This shows that possession of high level of knowledge of tobacco use sometimes could lead to negative attitude towards its use.

Table 6 revealed that both age groups; 16-17years, 18 years and above had negative attitude towards tobacco use in all items except in two. This finding was expected and therefore not surprising due to some reasons. One of such reasons is that

both age groups of students were expected to run a uniform curriculum and taught by the lecturers who are supposed to have similar qualifications and experience on health matter (tobacco education). Another reason for their negative attitude towards tobacco use could be as a result of exposure to television programme on tobacco use, reading newspapers on drug use and also listening to radio on health matters, especially tobacco use. Both age groups had positive attitude towards two items. This result was surprising and not expected. This is because with the high level of knowledge exhibited, it was expected that they would all have negative attitude to tobacco use. However, this colloborates the assertion of Umeh (1991) in which the author reported that few (20 %) of the respondents had positive attitude towards tobacco use. The reason for their positive attitude towards this dimension could be the erroneous belief that tobacco has some medicinal and beneficial effects.

Result in Table 7 showed that both male and female students had negative attitude towards tobacco use. This finding was expected and therefore not surprising. This is because of the high level of knowledge exhibited by both male and female students regarding tobacco use. This finding agrees with that of Ewuzie (2005) which reported that both male and female students had negative attitude towards tobacco use.

Tobacco use practice of students in tertiary institutions.

Result in Table 3 indicated that majority of students in tertiary institutions had adopted all forms of tobacco practice. This finding was not expected and so was surprising. This is because from the earlier finding of this study, it was gathered that the students had high level of knowledge and developed negative attitude towards tobacco use, therefore, it was expected of the students not to indulge in tobacco use practice. It is unfortunate that despite the fact that students are expected to be knowledgeable in the tobacco use hazards yet they are still exhibiting undesirable practice. This finding is not however, surprising since Okafor (1992) observed that knowledge alone may not determine behaviour or practice.

Result in Table 8 revealed that majority of the students aged 18 years and above (57.1%) had practiced tobacco use. This finding is however, surprising and not expected. This is sequel to the fact that students of both age groups had high level of knowledge as

well as negative attitude towards tobacco use as found in the previous result. To this end, one would expect them to detest tobacco use to avoid all the negative tendencies emanating from its practice. This finding however, is in conformity with that of Von Ah, et al, (2004) in which majority of students (77 per cent) who had smoked a whole cigarette or used other tobacco products did so at 16years of age or younger. It is disheartening to note that, despite the fact that WHO and the Federal Government warn that smokers are liable to die young, yet students chose to smoke ignoring the warning signals to the detriment of their health.

Result in Table 9 pointed out that (57.9 per cent) of male and (65.4 per cent) of female students had practiced tobacco use. This finding was not expected and so was surprising. This is because of the fact that both the male and female students had exhibited high level of knowledge in the previous result. Ordinarily, it was expected that very few students would have practiced tobacco use judging from the negative attitude they had towards tobacco use. The fact that majority of both male and female students had practiced tobacco use might not be unconnected with the so called role modeling by actors and actresses who engage in tobacco encouraging use the students to emulate. It could also be as a result of aggressive advertisement portraying smokers as smart, healthy and sophisticated people. The reason also might be that students are not been provided with tobacco education as a necessary tool to equip them for healthy life style. Besides the fact that tobacco products are readily available everywhere in our society and there is no restriction to access, the students have the opportunity to buy and use tobacco. Peer influence could also contribute to studentsô practice of tobacco use as well as parents and siblings who smoke. This finding contradicted that of Boehm (1993) which reported that females were likely than males to practice protective health behaviours or practices.

Difference in tobacco used knowledge, attitude and practice of students in tertiary institutions.

Result in Table 10 indicated that the null hypothesis of no significant difference in level of knowledge possessed by male and female students regarding tobacco use was accepted. This means that gender does not make any difference in tobacco use knowledge of students. This finding was expected and also not surprising. This is because both male and female students are exposed to the same experience which might influence their

knowledge. However, this study disagrees with that of Siziya, et al, (2007) which reported that male students had higher knowledge than their female counterparts. The reason for this could be as a result of different family background which respondents came from, as well as a result of exposure to different users and availability of tobacco products at low prices.

Result in Table 11 showed that the null hypothesis of no significant difference in the knowledge possessed by the students in tertiary institutions regarding tobacco use according to age was accepted. This implies that age was not significant in determining the level of knowledge of the students. This finding was surprising as it was not expected. Nevertheless, the finding was contrary to that of Adams (1975) in which students in all age groups differed in their level of knowledge of tobacco use.

Result in Table 12 revealed that the null hypothesis of no significant difference in tobacco use attitude of the students according to gender was accepted. This finding was not expected and thus surprising. This shows that both male and female students did not differ in their attitude towards all items concerning attitude towards tobacco use. This finding agreed with that of Ewuzie (2005) which both male and female students had negative attitude towards tobacco use.

Result in Table 13 indicated that the null hypothesis of no significant difference in tobacco use attitude of the students according to age was accepted. This finding was surprising because it was not expected. This means to say that age was not a strong determinant of the tobacco use attitude of the students. This finding was in consonance with that of Umeh (1991) in which majority of students in all age groups had negative attitude towards tobacco use.

Result in Table 14 pointed out that the null hypothesis of no significant difference in tobacco use practice of the students according to gender was accepted. This finding was not expected, thus surprising. This means that gender does not determine the tobacco use of the students. This finding was in consonance with that of Ewuzie (2005) in which both male and female students practiced tobacco use equally.

Result in Table 15 reveals that the null hypothesis of no significance different in tobacco use practice of students according age was accepted. This finding was not expected thus it was a surprise. This means that age is not a strong determinant of

tobacco use practice. However, the finding agrees with that of Okafor (1992) in which students of all ages studied practiced tobacco.

CHAPTER FIVE

Summary, Conclusions, and Recommendations

Summary,

The purpose of the study was to determine tobacco use knowledge, attitude and practice among students in tertiary institutions in Kogi State, Nigeria. In order to achieve the purpose of the study, nine specific objectives coupled with nine corresponding research questions were formulated. Six null hypotheses were postulated which guided the study. Demographic variables of age and gender were also investigated. Literature pertinent to the study was reviewed under the following sub-headings: Conceptual frame work, theoretical frame work, and empirical studies on tobacco use knowledge, attitude and practice among students in tertiary institutions.

Descriptive survey research design was utilized for the study. The study population comprised of 31,600 students drawn from the four selected tertiary institutions in Kogi State. A Yaro Yamane formula for estimating sample size, emphasized by Achor and Ejigbo (2010) was employed to draw the sample for the study. A two-stage sampling technique was used. At the first stage, tertiary institutions were selected by systematic random sampling (SRS).The second stage consisted of selecting respondents by random sampling of balloting without replacement. The proportion allocation was applied based on population of each sampled institution. This procedure produced a sample of 395 respondents which was utilized for the study.

The researcher designed questionnaire known as Tobacco Use Knowledge, Attitude and Practice Questionnaire (TUKAPQ), comprising of four sections, A, B, C and D was the instrument used for the collection of data. Four experts from the Department of Health and Physical Education and one from Department of Statistics all of the University of Nigeria, Nsukka, validated the instrument. In order to test the reliability of the instrument, the correlation coefficient was obtained using a pre-test.

Percentage means using Ashurôs (1977) criterion, slightly modified by Okafor (1997) were utilized for answering the research questions bothering on knowledge, while modified 4-points scale by Osuala(2005), Enyi and Nworgu (2006) were used to answer research questions on attitude of the students towards tobacco use. The ñYesò or ñNoò response emphasized by Ifegbesan (2008) was utilized for answering the research

questions on the practice of tobacco use by the students. The t-Test statistics was used to test the null hypotheses one to four at .05 level of significance, while Chi-square statistics was employed to test the null hypotheses five and six at .05 level of significance. The findings include:

1. Students in tertiary institutions had very high level ($\overline{X}$ = 82.71) of knowledge of tobacco use. This is contained in Table 1.
2. Students in tertiary institutions had negative attitude (grand = 2.37) towards tobacco use. This is contained in Table 2.
3. Majority of the students in tertiary institutions (61.3 per cent) had practiced tobacco use. This is contained in Table 3.
4. Students in tertiary institutions aged 18 years and above had very high level ($\overline{X}$ = 83.29) of knowledge while those aged 16 ï 17 years had high level ($\overline{X}$ =77.89) of knowledge regarding tobacco use. This is contained in Table 4.
5. Male and female students in tertiary institutions had very high level ($\overline{X}$ = 82.87 and $\overline{X}$ = 82.52 respectively) of knowledge regarding tobacco use. This is contained in Table 5.
6. Students in tertiary institutions aged 18 years and above and 16-17 years had negative attitude (grand = 2.37 and 2.35 respectively) towards tobacco use. This is contained in Table 6.
7. Male and female students in tertiary institutions had negative attitude ($\overline{X}$ = 2.35 and $\overline{X}$ = 2.40 respectively) towards tobacco use. This is contained in Table 7.
8. All age groups of students in tertiary institutions had practiced tobacco use (18 years and above 61.8%, 16-17 years, 75.1%). This is contained in Table 8.
9. Female and male students in tertiary institutions had practiced (65.4% and 57.9% respectively) tobacco use. This is contained in Table 9.
10. There was no significant difference in the level of knowledge possessed by both male and female students in tertiary institutions regarding tobacco use (t-Cal = .198, p = .843>.05). This is contained in Table 10.
11. There was no significant difference in the level of knowledge possessed by the students in tertiary institutions regarding tobacco use according to age (t-Cal = 1.907, p = .057>.05). This is contained in Table 11.

12. There was no significant difference in tobacco use attitude of the students in tertiary institutions according to gender (grand t-Cal = 134, p = .0531 > .05). This is contained in Table 12.
13. There was no significant difference in tobacco use attitude of the students in tertiary institution according to age (grand t-Cal = 0.174, p = 0.596 > .05). This is contained in Table 13.
14. There was no significant difference in tobacco use practice of the students in tertiary institutions according to gender (grand χ^2 ï Cal = .8965 and p = .4972 > .05). This is contained in Table 14.
15. There was no significant difference in tobacco use practice of the students in tertiary institutions according to age (grand χ^2 - Cal = .9805 and p = .5394 > .05). This is contained in Table 15.

Conclusions

Based on the findings and discussion of the study, the following conclusions were drawn:

1. Students in tertiary institutions had very high level of knowledge regarding tobacco use.
2. Students in tertiary institutions had negative attitude towards tobacco use.
3. Majority of the students in tertiary institutions had practiced tobacco use.
4. Students in tertiary institutions aged 18 years and above had very high level of knowledge of tobacco use while those aged 16 to 17 years had high level of knowledge regarding tobacco use.
5. Male and female students in tertiary institutions had very high level of knowledge regarding tobacco use.
6. Both students in tertiary institutions aged 16 to 17 years and 18 years and above had negative attitude towards tobacco use.
7. Both male and female students in tertiary institutions had negative attitude towards tobacco use.
8. All age groups of students in tertiary institutions had practiced tobacco use.
9. Male and female students in tertiary institutions had practiced tobacco use.

10. There was no significant difference in the level of knowledge possessed by both male and female students in tertiary institutions regarding tobacco use.
11. There was no significant difference in the level of knowledge possessed by students in tertiary institutions regarding tobacco use according to age.
12. There was no significant difference in tobacco use attitude of the students in tertiary institutions according to gender.
13. There was no significant difference in tobacco use attitude of the students in tertiary institutions according to age.
14. There was no significant difference in tobacco use practice of the students in tertiary institutions according to gender.
15. There was no significant difference in tobacco use practice of the students in tertiary institutions according to age.

Recommendations

Based on the findings of the present study, the following recommendations were made:

1. This study showed that all age groups of students in tertiary institutions (16-17years and 18years and above) had practice tobacco use. This indicates that education regarding smoking, emphasizing on its negative consequences, should begin early in the primary schools. It should be part of the primary school curriculum and students should be taught ways to say ñnoò to tobacco use.
2. The students who started tobacco use at earlier age may have done so due to earlier exposure to tobacco environment either at home, school or other social gathering. Electronic media, for example television and movies also have great influence on children. Therefore, it is the responsibility of the parents, teachers and other adults to supervise and educate children that smoking is an unfavourable habit which should not be attempted.
3. Smoking habits among students had been shown to be influenced by parents and other adult role models who smoke. This study also showed a slight association between students smoking and smoking in presence of their parents or family members. Thus, health practitioners should increase awareness among parents

that they are important role models for their children and should ensure that they do not influence their children towards smoking.

4. Marketing practices related to the sale of tobacco products, such as advertising, pricing, and availability, have been shown to influence the use of this substance among students. Tobacco advertisement depicts smoking as fun activities that people do to relax and socialize. There should be tighter restrictions on sale and use of the products to children under the age of 18 years.
5. Smoking is a great concern among students in tertiary institutions as it is related to many chronic diseases and mortality which become evident only after two or three decades of tobacco use. It is also associated with other risky behaviours such as other drug abuse, truancy and physical fighting. Therefore, anti-smoking campaign of the government has to be intensified so as to prevent adolescents from taking up this habit. Also, health care providers are to do all things possible to discourage smoking habit during treatment of victim and counseling.

Suggestions for further study

1. Study of this nature should be carried out to determine knowledge, attitude and practice of tobacco use among adolescents in Kogi State so as to establish the trend.
2. Similar study should also be conducted on prevalence and reasons for smoking among students in tertiary institutions in Kogi State.
3. Research study may be conducted on socio-cultural influence on smoking in Kogi State.
4. Research study may be also conducted on sex and gender differences in tobacco smoking among students in tertiary institutions in Kogi State.

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APPENDIX B:
Introductory Letter to Respondent

Department of Health and Physical Education,
University of Nigeria,
Nsukka.

Dear respondent,

I am a postgraduate student of the University of Nigeria, Nsukka currently conducting a study on the **"Tobacco Use Knowledge, Attitude and Practice among Students in tertiary institutions in Kogi State.**

You are therefore requested to give your honest responses to the questions below. The information you will give will not be used for any other purpose except the one stated above. No name is required in any part of this questionnaire. Your maximum cooperation will be highly appreciated.

While thanking you for your anticipated valuable time and assistance, I remain:

Yours truly,

ATULUKU, Gabriel
(*Researcher*)

APPENDIX C

Tobacco Use Knowledge, Attitude and Practice among Students in Tertiary Institutions in Kogi State (TUKAP) Questionnaire.

Section A

Please indicate by a tick (√) in the boxes provided below against options that suit you.

1. Gender
   a. Male ☐
   b. Female ☐

2. Age
   a. below 18 years of age ☐
   b. above 18 years of age ☐

3. Type of institution
   a. College of Education ☐
   b. Polytechnic ☐
   c. University ☐
   d. School of Health ☐

4. Family and friend's history of tobacco use.
   a. Parents/siblings/friends smoke ☐
   b. Parents/siblings/friends do not smoke ☐

Section B: Tobacco Use Knowledge.

Carefully read each of the following statements and tick (ã) against the appropriate options that are relevant to you.

5. Chewing tobacco is also known as plug, loose leaf and twist
   a. True ☐
   b. False ☐
6. Moist snuff is usually taken orally
   a. True ☐
   b. False ☐
7. Dry snuff is powdered tobacco that is inhaled through the nostrils or taken by mouth,
   a. True ☐
   b. False ☐
8. Tobacco smoking is the act of burning dried or cured leaves of the tobacco plant and inhaling the smoke,

a. True ☐
b. False ☐

9. Manufactured cigarettes are the most commonly consumed tobacco products worldwide.
a. True ☐
b. False ☐
10. Oral smokeless tobacco products are placed in the mouth, cheek, or inner lip and sucked (dipped) or chewed.
a. True ☐
b. False ☐
11. Roll-your-own (RYO) cigarettes are cigarettes hand-filled by the smoker from fine-cut, loose tobacco rolled in a cigarette paper.
a. True ☐
b. False ☐
12. RYO cigarette smokers are exposed to high concentrations of tobacco particulates, tar, nicotine, and tobacco-specific nitrosamines (TSNAS), and are at increased risk for developing cancers of the mouth, pharynx, larynx, lung and oesophagus

a. True ☐

b. False ☐
13. Tobacco use promotes health and increases life expectancy,
a. True ☐
b. False ☐
14. Smokers in general are as healthy as non-smokers,
a. True ☐
b. False ☐
15. Smoking and smokeless tobacco use contributes to throat loss, gum disease and delayed healing after dental surgery.
a. True ☐
b. False ☐
16. Smoking, chewing and dipping of tobacco stain the teeth and give the user chronic bad breath.
a. True ☐
b. False ☐

17. Passive smoking is the smoke that one inhales when exposed to someone smoking around.
a. True ☐
b. False ☐
18. Nicotine in tobacco does not lead to addiction.
a. True ☐
b. False ☐

Section C: Attitude of Students toward Tobacco Use

Instruction: In order to answer the questions below SA means strongly agree, A means agree, D means disagree, while SD is strongly disagree. You are expected to respond as it best represents your opinion on these questions. Please tick (V) as they apply to you.

	SA	A	D	SD
19. I enjoy staying close to people that smoke cigarette				
20. I hate tobacco use because of the health hazards involved				
21. It is fashionable to smoke cigarette				
22. I like pregnant women who smoke				
23. Tobacco use is good because it relives one from boredom and fatigue.				
24. I like women that smoke cigarette.				
25. Tobacco smoke irritates the eyes				
26. I like adolescents or young adults that use tobacco				
27. Tobacco smoking has some medicinal and beneficial effects				
28. Quitting tobacco use is not easy				
29. I am not interested in anti-smoking messages				
30. I enjoy smoking because it makes one smart.				

Section D: Practice of Tobacco Use among Students.

Please place a tick (ã) against "yes" or "no" in the boxes provided to answer each of the following questions as they best apply to you.

31. Have you ever smoked cigarettes or used any other tobacco products, even a single puff before now?

a. Yes ☐
b. No ☐

32. Do you stop smoking when sick?

a. Yes ☐
☐

b. No

33. Do you chew tobacco?
    a. Yes ☐
    b. No ☐
34. Have you ever smoked at home, school or social gathering?
    a. Yes ☐
    b. No ☐
35. Are you able to smoke more than 5 sticks of cigarettes in a day?
    a. Yes ☐
    b. No ☐
36. Can you stay throughout a day without smoking cigarettes?
    a. Yes ☐
    b. No ☐
37. Do you usually smoke cigarette during cold weather?
    a. Yes ☐
    b. No ☐
38. Have you ever participated in cigarette smoking competition at parties?
    a. Yes ☐
    b. No ☐
39. Have you ever smoked or used other tobacco products in the presence of your parents?
    a. Yes ☐
    b. No ☐
40. Do you just smoke for pleasure sake?
    a. Yes ☐
    b. . No ☐

APPENDIX D
LIST OF TERTIARY INSTITUTIONS IN KOGI STATE

S/n	NAMES OF INSTITUTION	Population
1	Kogi State College of Education, Ankpa	6,320
2	Kogi State University, Ayangba	18,580
3	Federal Polytechnic, Idah	7,450
4	Federal college of Education, Okene	7630
5	Kogi State Polytechnic, Lokoja	5000
6	Salem University, Lokoja	870
7	School of Health Technology, Idah	1700
8	School of Health Nursing, Obangede	3200

SYSTEMATIC SAMPLE SELECTION OF INSTITUTIONS IN KOGI STATE

Date of selection = 01/05/12

Random page = 1

Column interval = 2

Sample interval $= \frac{N}{n} = \frac{8}{4} = 2$

1. Ramdom start = 01 = 1 selected
2. = 01 + 02= 03 = 3 selected
3. 03 + 02 = 05 = 5 selected
4. 05 + 02 = 07 = 7 selected
5. 07 + 02 = 09 =9 Not selected

Therefore, institutions with serial numbers 1, 3, 5 and 7are selected for the study. That is Kogi State College of Education Ankpa (population, 6320), Kogi State University, Ayangba (Population, 18,580), Kogi State Polytechnic Lokoja (Population, 5000) and School of Health Technology, Idah (Population, 1,700). (Fisher and yates, 1948, statistical tables and C. 3rd Edn, xxxiii).

Appendix E

DETERMINATION OF NUMBER OF RESPONDENTS PER INSTITUTION

S/N	NAME OF INSTITUTION	POPULATION	SELECTION	NO. OF RESPONDENTS
1	KSCOE, ANKPA	6,320	6,320	79
2	KSU, AYANGBA	18,580	18,580	232
3	KSP, LOKOJA	5,000	5,000	63
4	SHT, IDAH	1,700	1,700	21